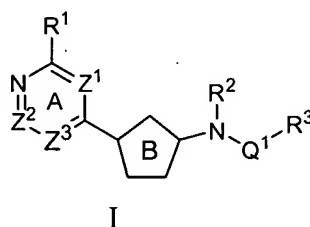


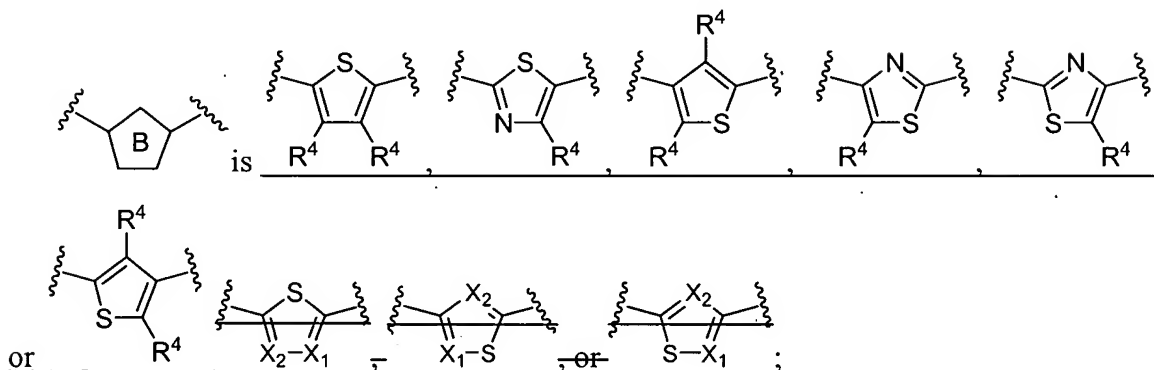
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# AMENDMENTS TO THE CLAIMS

1. (Currently amended) A compound of formula I:



or a pharmaceutically acceptable salt thereof, wherein:



$R^1$  is halogen, CN,  $\text{NO}_2$ , or  $\text{V}_m\text{R}$ ;

$Z^1$  and  $Z^3$  are each independently  $\text{CR}^Z$ ; [[, and]]

$Z^2$  is  $\text{CR}^1$ ;

each occurrence of  $R^Z$  is independently halogen, CN,  $\text{NO}_2$ , or  $\text{U}_n\text{R}'$ ;

$R^2$  is  $\text{U}_n\text{R}'$ ;

~~$X^1$  and  $X^2$  are each independently  $\text{CR}^4$  or N;~~

each occurrence of  $R^4$  is independently halogen, CN,  $\text{NO}_2$ , or  $\text{V}_m\text{R}$ ;

each occurrence of U or V is independently an optionally substituted  $\text{C}_{1-6}$  alkylidene chain, wherein up to two methylene units of the chain are optionally and independently replaced by  $-\text{NR}-$ ,  $-\text{S}-$ ,  $-\text{O}-$ ,  $-\text{CS}-$ ,  $-\text{CO}_2-$ ,  $-\text{OCO}-$ ,  $-\text{CO}-$ ,  $-\text{COCO}-$ ,  $-\text{CONR}-$ ,  $-\text{NRCO}-$ ,  $-\text{NRCO}_2-$ ,  $-\text{SO}_2\text{NR}-$ ,  $-\text{NRSO}_2-$ ,  $-\text{CONRNR}-$ ,  $-\text{NRCONR}-$ ,

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-OCONR-, -NRNR-, -NRSO<sub>2</sub>NR-, -SO-, or -SO<sub>2</sub>-;

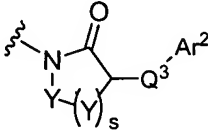
m and n are each independently 0 or 1;

each occurrence of R is independently hydrogen or an optionally substituted C<sub>1-6</sub> aliphatic group; and each occurrence of R' is independently hydrogen or an optionally substituted C<sub>1-6</sub> aliphatic group, a 3-8-membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur, or an 8-12 membered saturated, partially unsaturated, or fully unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from nitrogen, oxygen, or sulfur; or R and R', two occurrences of R, or two occurrences of R', are taken together with the atom(s) to which they are bound to form an optionally substituted 3-12 membered saturated, partially unsaturated, or fully unsaturated monocyclic or bicyclic ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

Q<sup>1</sup> is -CO-, ~~SO<sub>2</sub>-~~, or ~~SO<sub>2</sub>NR-~~;

R<sup>3</sup> is Q<sup>2</sup>-Ar<sup>1</sup>, wherein Q<sup>2</sup> is -(CHR<sup>6</sup>)<sub>q</sub>-, where q is 1, 2, or 3,

or R<sup>2</sup> and Q<sup>1</sup>-R<sup>3</sup>, taken together with the intervening nitrogen atom, form the cyclic

group: , where s is 1 or 2, each occurrence of Y is independently, as valency and stability permit, -CO-, -CS-, -SO<sub>2</sub>-, -O-, -S-, -NR<sup>5</sup>-, or -C(R<sup>5</sup>)<sub>2</sub>-, and R<sup>5</sup> is U<sub>n</sub>R';

~~Q<sup>2</sup> and Q<sup>3</sup> is are each independently~~ a bond or a C<sub>1-6</sub> alkylidene chain, wherein up to two methylene units of the chain are each optionally and independently replaced by -S-, -O-, -CS-, -CO<sub>2</sub>-, -OCO-, -CO-, -COCO-, -CONR'-, -NR'CO-, -NR'CO<sub>2</sub>-, -SO<sub>2</sub>NR'-, -NR'SO<sub>2</sub>-, -CONR'NR'-, -NR'CONR'-, -OCONR'-, -NR'NR'-, -NR'SO<sub>2</sub>NR'-, -SO-, or -SO<sub>2</sub>-; and wherein any carbon atom in the one or more methylene units is optionally substituted with one or two occurrences of R<sup>6</sup>, wherein each

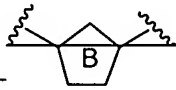
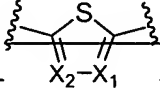
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occurrence of  $R^6$  is independently halogen, CN,  $NO_2$ , or  $U_nR'$ , or two occurrences of  $R^6$ , or  $R'$  and  $R^6$ , taken together with the atoms to which they are bound, form an optionally substituted 3-6-membered cycloalkyl, heterocyclyl, aryl or heteroaryl ring; and

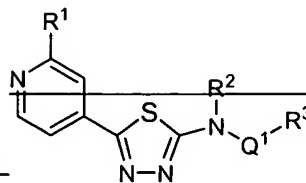
$Ar^1$  is a 5-8 membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from oxygen or sulfur, or an 8-12 membered saturated, partially unsaturated, or fully unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from oxygen or sulfur; wherein  $Ar^1$  is optionally substituted with 0-5 independent occurrences of  $TR^7$ ; wherein T is a bond or is a  $C_1$ - $C_6$  alkylidene chain wherein up to two methylene units of T are optionally and independently replaced by  $-NR-$ ,  $-S-$ ,  $-O-$ ,  $-CS-$ ,  $-CO_2-$ ,  $-OCO-$ ,  $-CO-$ ,  $-COCO-$ ,  $-CONR-$ ,  $-NRCO-$ ,  $-NRCO_2-$ ,  $-SO_2NR-$ ,  $-NRSO_2-$ ,  $-CONRNR-$ ,  $-NRCONR-$ ,  $-OCONR-$ ,  $-NRNR-$ ,  $-NRSO_2NR-$ ,  $-SO-$ , or  $-SO_2-$ ;

$Ar^2$  is a 5-8 membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur, or an 8-12 membered saturated, partially unsaturated, or fully unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from nitrogen, oxygen, or sulfur; wherein  $Ar^2$  is optionally substituted with 0-5 independent occurrences of  $TR^7$ ; wherein T is a bond or is a  $C_1$ - $C_6$  alkylidene chain wherein up to two methylene units of T are optionally and independently replaced by  $-NR-$ ,  $-S-$ ,  $-O-$ ,  $-CS-$ ,  $-CO_2-$ ,  $-OCO-$ ,  $-CO-$ ,  $-COCO-$ ,  $-CONR-$ ,  $-NRCO-$ ,  $-NRCO_2-$ ,  $-SO_2NR-$ ,  $-NRSO_2-$ ,  $-CONRNR-$ ,  $-NRCONR-$ ,  $-OCONR-$ ,  $-NRNR-$ ,  $-NRSO_2NR-$ ,  $-SO-$ , or  $-SO_2-$ ; and

each occurrence of  $R^7$  is independently  $R'$ , halogen,  $NO_2$ , or CN;  
provided that:

~~1) for compounds described where~~  ~~is~~  ~~, one or more of, or all of~~  
~~the following conditions apply:~~

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A) ~~for compounds having the structure:~~

i) ~~when R¹ is Cl, and R² is CH(CH₃)COOCH₃ or hydrogen, then Q¹-R³ is not CO( unsubstituted phenyl), CO( unsubstituted 2-furyl), or COCH₂( unsubstituted phenyl);~~

ii) ~~when R¹ is hydrogen, R² is hydrogen, and Q¹ is CO, then R³ is not:~~

a) ~~phenyl substituted with 4-O(CH₂)₄-7-CH₃ or 4-(CH₂)₄-7-CH₃;~~

b) ~~phenyl substituted with 2-Cl, 4-NO₂, 4-Cl, 2-Br, 3-Br, 3-I, 3-CH₃, 4-OCH₃, 3-NO₂, or 4-I;~~

c) ~~2,6-OCH₃-phenyl;~~

d) ~~(5-Cl, 3-CH₃, 1-phenyl)-pyrazol-4-yl; or~~

e) ~~4-OnBu-phenyl, CH₂O(2-F-phenyl), (CH₂)₂phenyl, furan-2-yl, thiophen-2-yl, 4-CH₃-phenyl, CH₂O(2-CH₃-phenyl), 3-OCH₃-phenyl, 2-(2,5-dimethoxyphenyl)quinolin-4-yl, NH-(4-Cl-phenyl), NH-(3,4-dichlorophenyl), (2-CO₂H, 3-NO₂)-phenyl, 3,5-dimethyl-1,2,4-oxazol-4-yl, CH=CH-phenyl, 4-F-phenyl, C(CH₃)₂O-(4-Cl-phenyl), NH(3-Cl-phenyl), NHphenyl, unsubstituted phenyl, 3,4,5-OCH₃-phenyl, 4-NO₂-phenyl, 4-cyclopentoxyphe-nyl, (CH₂)₃phenyl, (tricyclo[3.3.1.1.3,7]decan-1-yl, CH₂O-(3-CH₃-phenyl), 3-NO₂-phenyl, cyclopropyl (4-tert-butyl-phenyl), 2,3-OCH₃-phenyl, 1,3-benzodioxo-5-yl, CH₂-O-(4-F-phenyl), or 3-Br-phenyl;~~

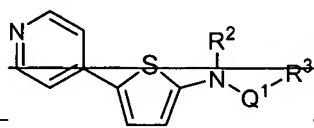
iii) ~~when R¹ is hydrogen, R² is hydrogen, and Q¹ is CSNH, then R³ is not 2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl;~~

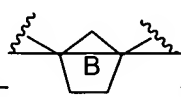
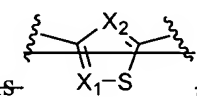
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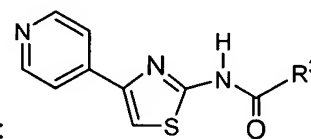
iv) when  $R^1$  is hydrogen,  $R^2$  is hydrogen, and  $Q^1$  is  $SO_2$ , then  $R^3$  is not unsubstituted phenyl, unsubstituted benzyl, unsubstituted naphthyl, phenyl substituted with para  $NHCOCH_3$ , para  $NH_2$ , or para  $CH_3$ ; and

v) when  $R^1$  is hydrogen,  $R^2$  is  $CH_2CH=CH_2$ , and  $Q^1$  is  $CO$ , then  $R^3$  is not 4- $OCH_3$ -phenyl, unsubstituted naphthyl,  $NH$  (4- $OCH_3$ -phenyl), 3,5- $OCH_3$ -phenyl,  $CH_2O$ phenyl,  $CH_2$ -thiophen-2-yl, or  $CH$ (phenyl)( $CH_2CH_3$ ); and

vi) when  $R^1$  is hydrogen,  $R^2$  is  $CH_2CH_3$ , and  $Q^1$  is  $CO$ , then  $R^3$  is not 2,4- $Cl$ -phenyl; and

B) for compounds having the structure: , when  $R^2$  is hydrogen or  $CH_3$ , and  $Q^1$  is  $CO$ , then  $R^3$  is not  $OCH_2CH_2OCH_2$ phenyl;

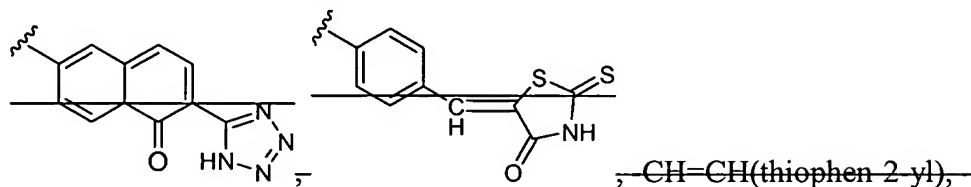
II) for compounds described where  is , one or more of, or all of the following conditions apply:

A) for compounds having the structure: ,

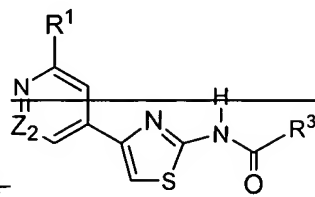
i) when  $R^3$  is  $Q^2-Ar^1$ , and  $Q^2$  is a bond then  $Ar^1$  is not any one or more of the following: unsubstituted phenyl or phenyl substituted with 2- $Br$ ; 2- $Cl$ ; 2- $I$ ; 2,6- $F$ ; 3,5- $OCH_3$ ; 3,4,5- $OCH_3$ ; 2,4- $OCH_3$ ; 3,4- $CH_3$ ; 2,5- $Cl$ ; 3,4- $OCH_3$ ; 2- $Cl$ , 5- $NO_2$ ; 3,5- $Cl$ ; 3- $O(CH_2)_4CH_3$ ; 3- $O$ -n-butyl; 3- $CF_3$ ; 3- $OCH_3$ ; 3- $Br$ ; 3- $NO_2$ ; 3- $CH_3$ ; 3- $O$ -phenyl; 3- $Cl$ ; 4- $N(CH_3)_2$ ; 4- $N(CH_2CH_3)_2$ ; 4- $SO_2N(R^2)_2$ ; 4- $CN$ ; 4- $COOCH_3$ ; 4- $C(O)$ phenyl; 4-phenyl; 4-tert-butyl; 4- $O$ -phenyl; 4- $O$ -isopropyl; 4- $OCH_3$ ; 4- $OCH_2CH_3$ ; 4- $O$ -n-butyl; 4- $Cl$ ; 4- $Br$ ; 4- $F$ ; 4- $CH_3$ ; 4- $NO_2$ ; 4- $Cl$ ; 3- $NO_2$ ; 4-morpholino; 3- $NO_2$ , 2,5-dioxopyrrolidinyl, or 4-piperidinyl; and

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ii)  $R^3$  is not any one ~~or more~~ of the following groups:



~~CH=CH unsubstituted phenyl, -CH<sub>2</sub>(3-NHCOPh-phenyl), 6-bromo-2-(4-ethylphenyl)-4-quinoliny, -CH<sub>2</sub>-pyrrolidine, unsubstituted cyclohexyl, unsubstituted benzyl, unsubstituted furan-2-yl, -CH=CH(3-NO<sub>2</sub>-phenyl), -CH=CH(4-NO<sub>2</sub>-phenyl), -CH<sub>2</sub>-naphthyl, unsubstituted naphthyl, unsubstituted thiophene, unsubstituted cyclopropyl, 1,4-benzodioxin, 2-oxo-1-benzopyran, 4-oxo-1-benzopyran, 2-thienyl-quinolin-4-yl, 3-chloro-benzo[b]thiophen-2-yl, 5-Br-(thiophen-2-yl), 5-Cl-(thiophen-2-yl), 5-NO<sub>2</sub>-(thiophen-2-yl), 5-NO<sub>2</sub>-(furan-2-yl), 2,5-Cl-(thiophen-3-yl), -CH=CH(5-NO<sub>2</sub>-thiophen-2-yl), 5-NO<sub>2</sub>-(benzothiophen-2-yl), 3-OCH<sub>3</sub>-(naphth-2-yl), -CH<sub>2</sub>O(2,4-Cl-phenyl), (CH<sub>2</sub>)<sub>2</sub>S-phenyl, 2-phenyl-quinolin-4-yl, -CH<sub>2</sub>O(4-Cl-phenyl), -CH<sub>2</sub>CH<sub>2</sub>-3-(4-Cl-phenyl)-1-phenyl-1-H-pyrazol-4-yl, or -CH<sub>2</sub>(1,3-dioxoisindole) [; and]]~~



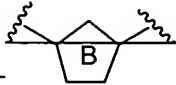
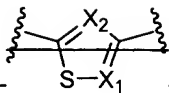
B) for compounds having the structure:

i) ~~when  $R^1$  is Cl, and  $X_1$  is C-Cl, then  $R^3$  is not NHSO<sub>2</sub>-(2-CF<sub>3</sub>-phenyl) or -NHSO<sub>2</sub>-(2,6-dimethoxy-phenyl);~~

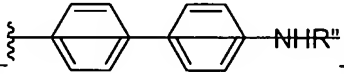
ii) ~~when  $R^1$  is CH<sub>3</sub>, and  $X_1$  is C-CH<sub>3</sub>, then  $R^3$  is not an optionally substituted indole or optionally substituted dihydroindole; and~~

C) ~~for compounds of general formula I, when  $Z_1$ ,  $Z_2$  and  $Z_3$  are each CH,  $R^1$  is H,  $X^1$  is CH and  $X_2$  is C-COOCH<sub>3</sub>, then  $R^3$  is not 2-(4-ethyl-phenyl)-6-bromo-quinolin-4-yl; and~~

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III. ~~for compounds described above where~~  ~~is~~  ~~, one or more of, or all of the following conditions apply:~~

~~A) when  $Z^1$ ,  $Z^2$  and  $Z^3$  are each CH,  $X^2$  is N,  $X^1$  is CH,  $Q^1$  is CONR, and  $R^2$  is hydrogen or CH<sub>3</sub>, then  $R^3$  is not optionally substituted pyridyl, optionally substituted thiazol-4-yl, CH<sub>2</sub>pyridyl, benzimidazol-4-yl, quinolin-2-yl, 1-bromo-isoquinolin-3-yl, benzthiazol-2-yl, optionally substituted 5,6,7,8-tetrahydro-naphthyridin-2-yl, or phenyl substituted with CH<sub>2</sub>piperidinyl; and~~

~~B) when  $Z^1$ ,  $Z^2$  and  $Z^3$  are each CH,  $X^2$  is N,  $X^1$  is CH,  $Q^1$  is SO<sub>2</sub>, and  $R^2$  is hydrogen, then  $R^3$  is not phenyl substituted with~~  ~~where  $R''$  is hydrogen or COCH<sub>3</sub>;~~

~~C) when  $Z^1$ ,  $Z^2$  and  $Z^3$  are each CH,  $X_1$  is C-CO<sub>2</sub>H,  $X^2$  is CH,  $R^2$  is hydrogen, and  $Q^1$  is SO<sub>2</sub>, then  $R^3$  is not 2-CH<sub>3</sub>-phenyl; and~~

~~D) when  $Z^1$ ,  $Z^2$  and  $Z^3$  are each CH,  $X_1$  is CH,  $X^2$  is N,  $R^2$  is hydrogen, and  $Q^1$  is CO, then  $R^3$  is not 5-methoxy-6-trifluoromethyl-1H-indole.~~

2-3. (Canceled)

4. (Currently amended) The compound of claim 1 [[3]], wherein  $R^2$  is hydrogen, or is  $U_nR'$ , where n is 1, and U is a C<sub>1-6</sub> alkylidene chain wherein one or two methylene units are optionally and independently replaced by O, NR, S, or C(O).

5. (Currently amended) The compound of claim 1 [[3]], wherein U is -CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>O-, -CH<sub>2</sub>S-, -CH<sub>2</sub>NR-, -CH<sub>2</sub>CH<sub>2</sub>O-, -CH<sub>2</sub>CH<sub>2</sub>S-, -CH<sub>2</sub>CH<sub>2</sub>NR-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>O-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>S-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NR-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>O-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>S-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NR-, -CH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>-, -(CH<sub>2</sub>)<sub>4</sub>NHCH<sub>2</sub>-, -(CH<sub>2</sub>)<sub>3</sub>NHCH<sub>2</sub>CH<sub>2</sub>-, or -CH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>-, and preferred R' groups

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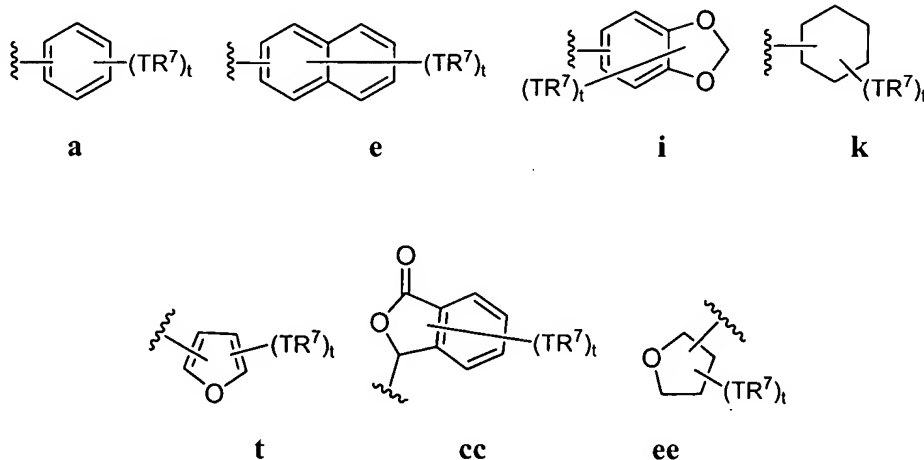
are hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl, optionally substituted tetrahydropyranyl, pyrrolidinyl, piperidinyl, piperazinyl, morpholinyl, thiomorpholinyl, pyridinyl, phenyl, or cyclohexyl, or R and R', taken together with the nitrogen atom to which they are bound, form an optionally substituted 5- or 6-membered heterocyclyl ring.

6. (Currently amended) The compound of claim 1 [[3]], wherein Q<sup>1</sup> is -C(O)- or -SO<sub>2</sub>NR-.

7. (Canceled)

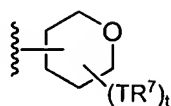
8. (Currently amended) The compound of claim 1 [[7]], wherein R<sup>6</sup> is CH<sub>2</sub>OH, CH<sub>2</sub>CH<sub>2</sub>OH, OH, OMe, OEt, NH<sub>2</sub>, NH(Me), NH(Et), N(Me)(Me), CH<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, NHCO<sub>2</sub>*t*-butyl, phenyl, cyclopentyl, methyl, ethyl, isopropyl, cyclopropyl, NH(CH<sub>2</sub>)<sub>3</sub>NH<sub>2</sub>, NH(CH<sub>2</sub>)<sub>2</sub>NH<sub>2</sub>, NH(CH<sub>2</sub>)<sub>2</sub>NHEt, NHCH<sub>2</sub>pyridyl, NHSO<sub>2</sub>phenyl, NHC(O)CH<sub>2</sub>C(O)O*t*-butyl, NHC(O)CH<sub>2</sub>NH<sub>3</sub>, and NHCH<sub>2</sub>-imidazol-4-yl.

9. (Previously presented) The compound of claim 3, wherein Ar<sup>1</sup> is:

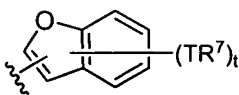




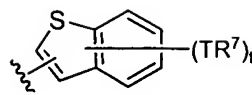
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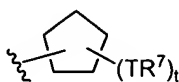
**ii**



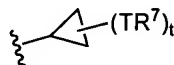
**jj**



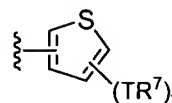
**kk**



**mm**



**oo**



**pp**

wherein  $t$  is 0, 1, 2, 3, 4 or 5, and wherein any  $\text{Ar}^1$  is bonded to  $\text{Q}^2$  through any substitutable carbon atom, and wherein one or more hydrogen atoms on any substitutable carbon atom is substituted with one or more independent occurrences of  $\text{TR}^7$ .

10. (Previously presented) The compound of claim 9, wherein  $\text{Ar}^1$  is **a**, **e**, **i**, **k**, **cc**, **jj**, or **pp**.

11. (Original) The compound of claim 9, wherein  $T$  is a bond or is an optionally substituted  $\text{C}_{1-6}$  alkylidene chain wherein one or two methylene units are optionally and independently replaced by  $-\text{O}-$ ,  $-\text{NR}-$ ,  $-\text{S}-$ ,  $-\text{SO}_2-$ ,  $-\text{COO}-$ ,  $-\text{CO}-$ ,  $-\text{OSO}_2-$ ,  $-\text{NRSO}_2-$ ,  $-\text{CONR}-$ , or  $-\text{SO}_2\text{NR}-$ , and  $\text{R}^7$  is  $\text{R}'$  or halogen.

12. (Original) The compound of claim 9, wherein each occurrence of  $\text{TR}^7$  is independently  $-\text{C}_{1-3}\text{alkyl}$ ,  $-\text{OR}'$ ,  $-\text{SR}'$ ,  $-\text{CF}_3$ ,  $-\text{OCF}_3$ ,  $-\text{SCF}_3$ ,  $-\text{F}$ ,  $-\text{Cl}$ ,  $\text{I}$ ,  $-\text{Br}$ ,  $-\text{COOR}'$ ,  $-\text{COR}'$ ,  $-\text{O}(\text{CH}_2)_4\text{N}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)_3\text{N}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)_2\text{N}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)\text{N}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)_4\text{CON}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)_3\text{CON}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)_2\text{CON}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)\text{CON}(\text{R})(\text{R}')$ ,  $-\text{C}(\text{O})\text{N}(\text{R})(\text{R}')$ ,  $-(\text{CH}_2)_4\text{OR}'$ ,  $-(\text{CH}_2)_3\text{OR}'$ ,  $-(\text{CH}_2)_2\text{OR}'$ ,  $-\text{CH}_2\text{OR}'$ , optionally substituted phenyl or benzyl,  $-\text{N}(\text{R})(\text{R}')$ ,  $-(\text{CH}_2)_4\text{N}(\text{R})(\text{R}')$ ,

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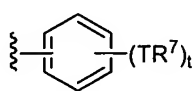
$-(\text{CH}_2)_3\text{N}(\text{R})(\text{R}')$ ,  $-(\text{CH}_2)_2\text{N}(\text{R})(\text{R}')$ ,  $-(\text{CH}_2)\text{N}(\text{R})(\text{R}')$ , or  $\text{SO}_2\text{N}(\text{R})(\text{R}')$ ,  $\text{NRSO}_2\text{R}'$ ,  $\text{CON}(\text{R})(\text{R}')$ , or  $-\text{OSO}_2\text{R}'$ .

13. (Canceled)

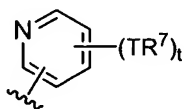
14. (Currently amended) The compound of claim 1 [[13]], wherein  $\text{Q}^3$  is a direct bond, or is  $-(\text{CHR}^6)_q-$ ,  $-(\text{CHR}^6)_q\text{O}-$ ,  $-(\text{CHR}^6)_q\text{S}-$ ,  $-(\text{CHR}^6)_q\text{S}(\text{O})_2-$ ,  $-(\text{CHR}^6)_q\text{S}(\text{O})-$ ,  $-(\text{CHR}^6)_q\text{NR}-$ , or  $-(\text{CHR}^6)_q\text{C}(\text{O})-$ , wherein  $q$  is 0, 1, 2, or 3, and  $\text{R}^6$  is  $\text{R}'$ ,  $-\text{N}(\text{R})(\text{R}')$ ,  $-(\text{CH}_2)_{1-4}\text{N}(\text{R})(\text{R}')$ ,  $-\text{OR}'$ ,  $-(\text{CH}_2)_{1-4}\text{OR}'$ ,  $-\text{NR}(\text{CH}_2)_{1-4}\text{N}(\text{R})(\text{R}')$ ,  $-\text{NR}(\text{CH}_2)_{1-4}\text{SO}_2\text{R}'$ ,  $-\text{NR}(\text{CH}_2)_{1-4}\text{COOR}'$ , or  $-\text{NR}(\text{CH}_2)_{1-4}\text{COR}'$ , or two occurrences of  $\text{R}^6$ , taken together with the atoms to which they are bound, form an optionally substituted 3-6-membered saturated, partially unsaturated, or fully unsaturated ring.

15. (Original) The compound of claim 14, wherein  $\text{R}^6$  is  $\text{CH}_2\text{OH}$ ,  $\text{CH}_2\text{CH}_2\text{OH}$ ,  $\text{OH}$ ,  $\text{OMe}$ ,  $\text{OEt}$ ,  $\text{NH}_2$ ,  $\text{NH}(\text{Me})$ ,  $\text{NH}(\text{Et})$ ,  $\text{N}(\text{Me})(\text{Me})$ ,  $\text{CH}_2\text{NH}_2$ ,  $\text{CH}_2\text{CH}_2\text{NH}_2$ ,  $\text{NHCO}_2t\text{-butyl}$ , phenyl, cyclopentyl, methyl, ethyl, isopropyl, cyclopropyl,  $\text{NH}(\text{CH}_2)_3\text{NH}_2$ ,  $\text{NH}(\text{CH}_2)_2\text{NH}_2$ ,  $\text{NH}(\text{CH}_2)_2\text{NHEt}$ ,  $\text{NHCH}_2\text{pyridyl}$ ,  $\text{NHSO}_2\text{phenyl}$ ,  $\text{NHC}(\text{O})\text{CH}_2\text{C}(\text{O})\text{O}t\text{-butyl}$ ,  $\text{NHC}(\text{O})\text{CH}_2\text{NH}_3$ , and  $\text{NHCH}_2\text{-imidazol-4-yl}$ .

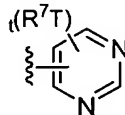
16. (Currently amended) The compound of claim 1 [[13]], wherein  $\text{Ar}^2$  is:



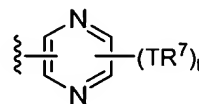
a



b

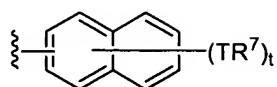


c

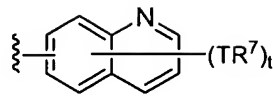


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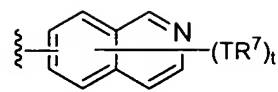
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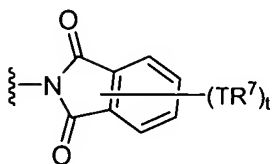
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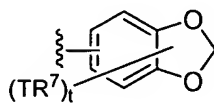
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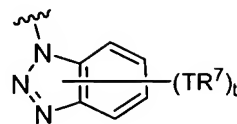
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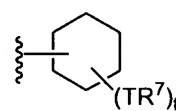
**h**



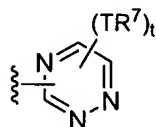
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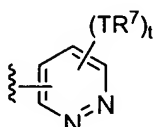
**j**



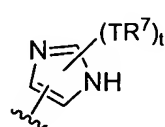
**k**



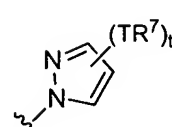
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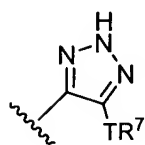
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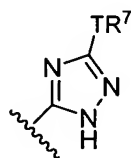
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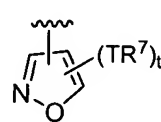
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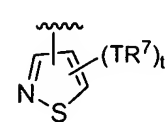
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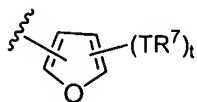
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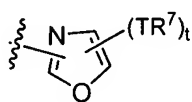
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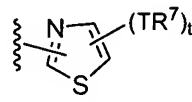
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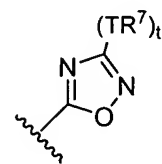
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**u**

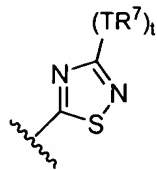


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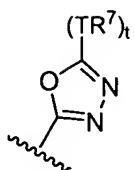


**w**

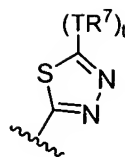
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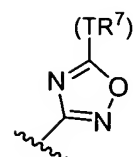
**x**



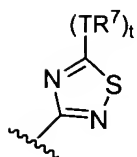
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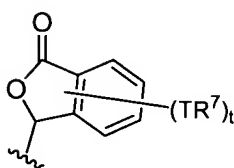
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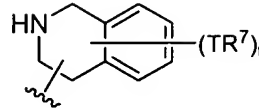
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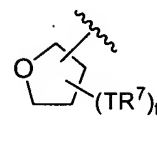
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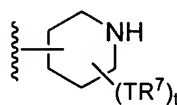
**cc**



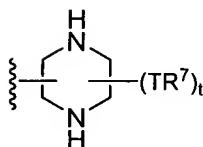
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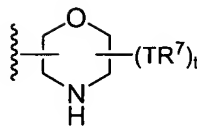
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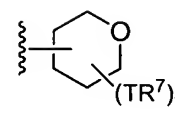
**ff**



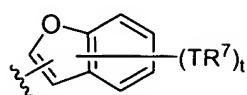
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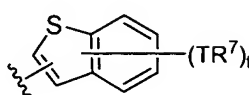
**hh**



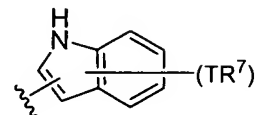
**ii**



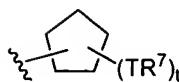
**jj**



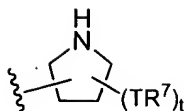
**kk**



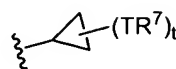
**ll**



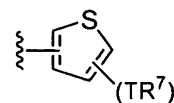
**mm**



**nn**



**oo**



**pp**

wherein  $t$  is 0, 1, 2, 3, 4 or 5, and wherein any  $Ar^2$  is bonded to  $Q^3$  through any substitutable nitrogen or carbon atom, and wherein one or more hydrogen atoms on any

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substitutable nitrogen or carbon atom is substituted with one or more independent occurrences of TR<sup>7</sup>.

17. (Original) The compound of claim 16, wherein Ar<sup>2</sup> is **a, b, e, g, h, i, j, k, n, r, cc, dd, ff, jj, ll, or pp**.

18. (Original) The compound of claim 16, wherein T is a bond or is an optionally substituted C<sub>1-6</sub> alkylidene chain wherein one or two methylene units are optionally and independently replaced by -O-, -NR-, -S-, -SO<sub>2</sub>-, -COO-, -CO-, -OSO<sub>2</sub>-, -NRSO<sub>2</sub>-, -CONR-, or -SO<sub>2</sub>NR-, and R<sup>7</sup> is R' or halogen.

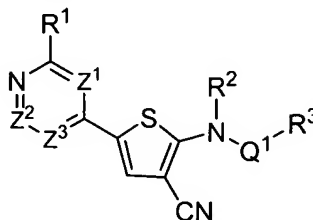
19. (Original) The compound of claim 16, wherein each occurrence of TR<sup>7</sup> is independently -C<sub>1-3</sub>alkyl, -OR', -SR', -CF<sub>3</sub>, -OCF<sub>3</sub>, -SCF<sub>3</sub>, -F, -Cl, I, -Br, -COOR', -COR', -O(CH<sub>2</sub>)<sub>4</sub>N(R)(R'), -O(CH<sub>2</sub>)<sub>3</sub>N(R)(R'), -O(CH<sub>2</sub>)<sub>2</sub>N(R)(R'), -O(CH<sub>2</sub>)N(R)(R'), -O(CH<sub>2</sub>)<sub>4</sub>CON(R)(R'), -O(CH<sub>2</sub>)<sub>3</sub>CON(R)(R'), -O(CH<sub>2</sub>)<sub>2</sub>CON(R)(R'), -O(CH<sub>2</sub>)CON(R)(R'), -C(O)N(R)(R'), -(CH<sub>2</sub>)<sub>4</sub>OR', -(CH<sub>2</sub>)<sub>3</sub>OR', -(CH<sub>2</sub>)<sub>2</sub>OR', -CH<sub>2</sub>OR', optionally substituted phenyl or benzyl, -N(R)(R'), -(CH<sub>2</sub>)<sub>4</sub>N(R)(R'), -(CH<sub>2</sub>)<sub>3</sub>N(R)(R'), -(CH<sub>2</sub>)<sub>2</sub>N(R)(R'), -(CH<sub>2</sub>)N(R)(R'), or SO<sub>2</sub>N(R)(R'), NRSO<sub>2</sub>R', CON(R)(R'), or -OSO<sub>2</sub>R'.

20. (Currently amended) The compound of claim 1 [[13]], wherein R<sup>5</sup> is hydrogen, (CH<sub>2</sub>)<sub>3</sub>OR', (CH<sub>2</sub>)<sub>2</sub>OR', (CH<sub>2</sub>)OR', (CH<sub>2</sub>)<sub>3</sub>N(R')<sub>2</sub>, (CH<sub>2</sub>)<sub>2</sub>N(R')<sub>2</sub>, (CH<sub>2</sub>)N(R')<sub>2</sub>, or C<sub>1-4</sub>aliphatic.

21-22. (Canceled)

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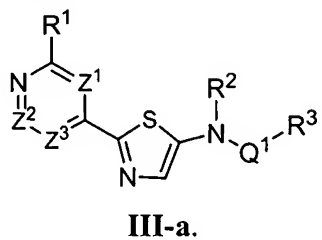
23. (Original) The compound of claim 1, wherein each occurrence of  $R^1$  is independently hydrogen, halogen, optionally substituted  $C_1$ - $C_4$ aliphatic, OR, SR, or  $N(R)_2$ .
24. (Previously presented) The compound of claim 23, wherein each occurrence of  $R^1$  is independently hydrogen, halogen,  $-CH_3$ ,  $-CH_2CH_3$ ,  $-OH$ ,  $-OCH_3$ ,  $-SCH_3$ ,  $-NH_2$ ,  $-N(CH_3)_2$ ,  $-N(CH_2CH_3)_2$ ,  $-NH(CH_2)_2NHCH_3$ ,  $-NH(\text{cyclopropyl})$ ,  $-NH(CH_2)\text{cyclopropyl}$ , or  $-NH(CH_2)_2N(CH_3)_2$ .
25. (Original) The compound of claim 1, wherein each occurrence of  $R^Z$  is independently hydrogen, halogen,  $C_1$ - $C_4$ aliphatic, OH, OR', or  $N(R)(R')$ .
26. (Original) The compound of claim 25, wherein each occurrence of  $R^Z$  is independently hydrogen, halogen, Me, OH, OMe,  $NH_2$ , or  $N(Me)_2$ .
27. (Original) The compound of claim 1, wherein  $R^4$  groups are each independently hydrogen,  $C_{1-6}$ aliphatic, CN, COR,  $C(=O)OR$ ,  $C(=O)N(R)_2$ , or halogen.
28. (Previously presented) The compound of claim 1, wherein one occurrence of  $R^4$  is CN and compounds have the general structure **II-a**:



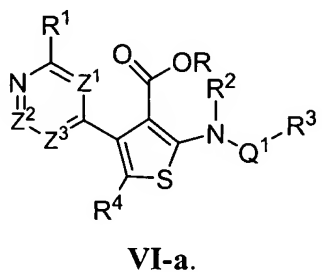
**II-a.**

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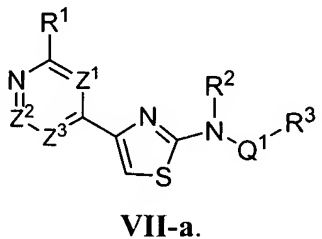
29. (Previously presented) The compound of claim 1, wherein  $R^4$  is hydrogen and compounds have the general structure **III-a**:



30. (Previously presented) The compound of claim 1, wherein one occurrence of  $R^4$  is hydrogen and the other occurrence of  $R^4$  is -COOR and compounds have the general structure **VI-a**:

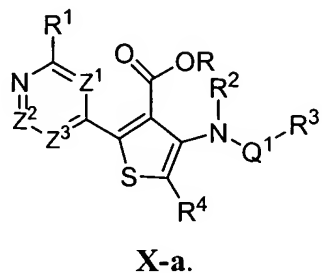


31. (Previously presented) The compound of claim 1, wherein  $R^4$  is hydrogen and compounds have the general structure **VII-a**:

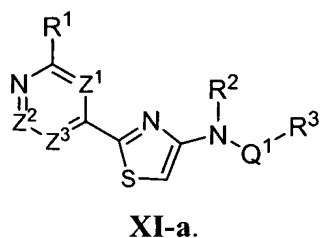


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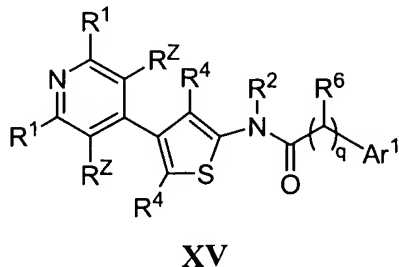
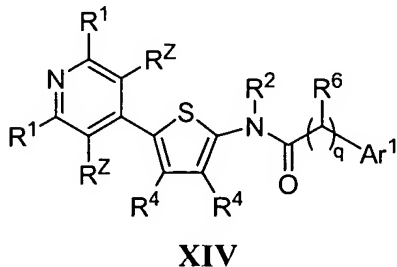
32. (Previously presented) The compound of claim 1, wherein one occurrence of  $R^4$  is hydrogen and the other occurrence of  $R^4$  is  $C(=O)OR$  and compounds have the general structure **X-a**:



33. (Previously presented) The compound of claim 1, wherein  $R^4$  is hydrogen and compounds have the general structure **XI-a**:

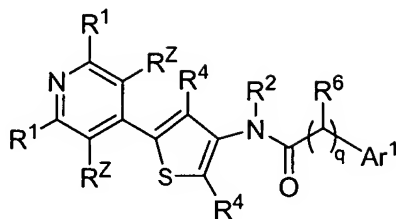


34. (Previously presented) The compound of claim 9, wherein  $Q^1$  is  $-CO-$ ,  $Q^2$  is  $CHR^6$ ,  $q$  is 1, 2, or 3, and compounds have one of formulas **XIV**, **XV**, or **XVI**:



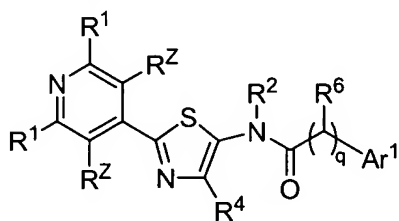


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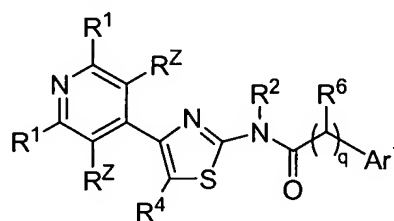


**XVI.**

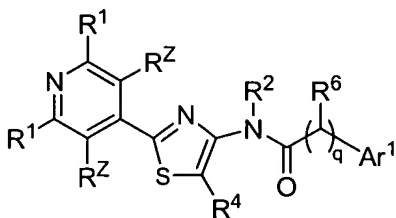
35. (Previously presented) The compound of claim 9, wherein Q<sup>1</sup> is -CO-, Q<sup>2</sup> is CHR<sup>6</sup>, q is 1, 2 or 3, and compounds have one of formulas **XVII**, **XVIII**, or **XIX**:



**XVII**



**XVIII**



**XIX.**

36. (Previously presented) The compound of claims 34 or 35, wherein compound variables are selected from one of more of the following groups:

- a) each occurrence of R<sup>1</sup> is independently hydrogen, halogen, optionally substituted C<sub>1</sub>-C<sub>4</sub>aliphatic, OR, SR, or N(R)<sub>2</sub>;
- b) each occurrence of R<sup>1</sup> is independently hydrogen, halogen, -CH<sub>3</sub>, -CH<sub>2</sub>CH<sub>3</sub>, -OH, -OCH<sub>3</sub>, -SCH<sub>3</sub>, -NH<sub>2</sub>, -N(CH<sub>3</sub>)<sub>2</sub>, -N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, -NH(CH<sub>2</sub>)<sub>2</sub>NHCH<sub>3</sub>, -NH(cyclopropyl), -NH(CH<sub>2</sub>)cyclopropyl, or -NH(CH<sub>2</sub>)<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>;

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c) each occurrence of  $R^Z$  is independently hydrogen, halogen, optionally substituted  $C_1$ - $C_4$ aliphatic, OH, O( $R'$ ), or N( $R$ )( $R'$ );

d) each occurrence of  $R^Z$  is independently hydrogen, halogen, Me, OH, OMe,  $NH_2$ , or N(Me) $_2$ ;

e)  $R^2$  is hydrogen, or is  $U_nR'$ , where n is 1, and U is  $-CH_2-$ ,  $-CH_2CH_2-$ ,  $-CH_2CH_2CH_2-$ ,  $-CH_2CH_2CH_2CH_2-$ ,  $-CH_2O-$ ,  $-CH_2S-$ ,  $-CH_2NR-$ ,  $-CH_2CH_2O-$ ,  $-CH_2CH_2S-$ ,  $-CH_2CH_2NR-$ ,  $-CH_2CH_2CH_2O-$ ,  $-CH_2CH_2CH_2S-$ ,  $-CH_2CH_2CH_2NR-$ ,  $-CH_2CH_2CH_2CH_2O-$ ,  $-CH_2CH_2CH_2CH_2S-$ ,  $-CH_2CH_2CH_2CH_2NR-$ ,  $-CH_2CH_2OCH_2CH_2-$ ,  $-(CH_2)_4NHCH_2-$ ,  $-(CH_2)_3NHCH_2CH_2-$ , or  $-CH_2CH_2NHCH_2CH_2-$ , and  $R'$  groups are hydrogen,  $C_1$ - $C_4$ alkyl, optionally substituted tetrahydropyranyl, pyrrolidinyl, piperidinyl, piperazinyl, morpholinyl, thiomorpholinyl, pyridinyl, phenyl, or cyclohexyl, or R and  $R'$ , taken together with the nitrogen atom to which they are bound, form an optionally substituted 5- or 6-membered heterocyclyl ring;

f) each occurrence of  $R^4$  is independently hydrogen,  $C_1$ - $C_6$ aliphatic, CN, COR, COOR, CON( $R$ ) $_2$ , or halogen;

g) q is 1, 2, or 3;

h)  $R^6$  is  $R'$ ,  $-N(R)(R')$ ,  $-(CH_2)_{1-4}N(R)(R')$ ,  $-OR'$ ,  $-(CH_2)_{1-4}OR'$ ,  $-NR(CH_2)_{1-4}N(R)(R')$ ,  $-NR(CH_2)_{1-4}SO_2R'$ ,  $-NR(CH_2)_{1-4}COOR'$ , or  $-NR(CH_2)_{1-4}COR'$ , or two occurrences of  $R^6$ , taken together with the atoms to which they are bound, form an optionally substituted 3-6-membered saturated, partially unsaturated, or fully unsaturated ring;

i)  $R^6$  is  $CH_2OH$ ,  $CH_2CH_2OH$ , OH, OMe, OEt,  $NH_2$ , NH(Me), NH(Et), N(Me)(Me),  $CH_2NH_2$ ,  $CH_2CH_2NH_2$ ,  $NHCO_2t$ -butyl, phenyl, cyclopentyl, methyl, ethyl, isopropyl, cyclopropyl,  $NH(CH_2)_3NH_2$ ,  $NH(CH_2)_2NH_2$ ,  $NH(CH_2)_2NHEt$ ,  $NHCH_2$ pyridyl,  $NHSO_2$ phenyl,  $NHC(O)CH_2C(O)Ot$ -butyl,  $NHC(O)CH_2NH_3$ , and  $NHCH_2$ -imidazol-4-yl;

j)  $Ar^1$  is ring **a**, **e**, **i**, **k**, **cc**, **jj**, or **pp** wherein t is 0, 1, 2, or 3, and T is a bond or is an optionally substituted  $C_{1-6}$  alkylidene chain wherein one or two methylene units are

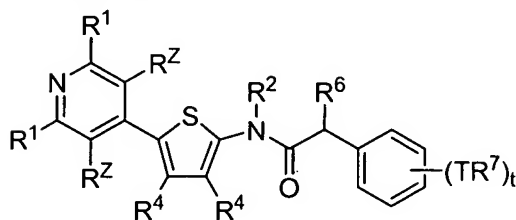
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optionally and independently replaced by -O-, -NR-, -S-, -SO<sub>2</sub>-, -COO-, -CO-, -OSO<sub>2</sub>-, -NRSO<sub>2</sub>-, -CONR-, or

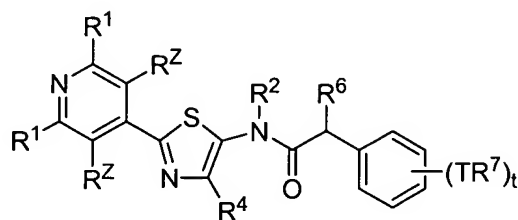
-SO<sub>2</sub>NR-, and R<sup>7</sup> is R' or halogen; or

k) Ar<sup>1</sup> is ring **a**, **e**, **i**, **k**, **cc**, **jj**, or **pp** wherein t is 0, 1, 2, or 3, and each occurrence of TR<sup>7</sup> is independently -C<sub>1-3</sub>alkyl, -OR', -SR', -CF<sub>3</sub>, -OCF<sub>3</sub>, -SCF<sub>3</sub>, -F, -Cl, I, -Br, -COOR', -COR', -O(CH<sub>2</sub>)<sub>4</sub>N(R)(R'), -O(CH<sub>2</sub>)<sub>3</sub>N(R)(R'), -O(CH<sub>2</sub>)<sub>2</sub>N(R)(R'), -O(CH<sub>2</sub>)N(R)(R'), -O(CH<sub>2</sub>)<sub>4</sub>CON(R)(R'), -O(CH<sub>2</sub>)<sub>3</sub>CON(R)(R'), -O(CH<sub>2</sub>)<sub>2</sub>CON(R)(R'), -O(CH<sub>2</sub>)CON(R)(R'), -C(O)N(R)(R'), -(CH<sub>2</sub>)<sub>4</sub>OR', -(CH<sub>2</sub>)<sub>3</sub>OR', -(CH<sub>2</sub>)<sub>2</sub>OR', -CH<sub>2</sub>OR', optionally substituted phenyl or benzyl, -N(R)(R'), -(CH<sub>2</sub>)<sub>4</sub>N(R)(R'), -(CH<sub>2</sub>)<sub>3</sub>N(R)(R'), -(CH<sub>2</sub>)<sub>2</sub>N(R)(R'), -(CH<sub>2</sub>)N(R)(R'), -SO<sub>2</sub>N(R)(R'), -NRSO<sub>2</sub>R', -CON(R)(R'), or -OSO<sub>2</sub>R'.

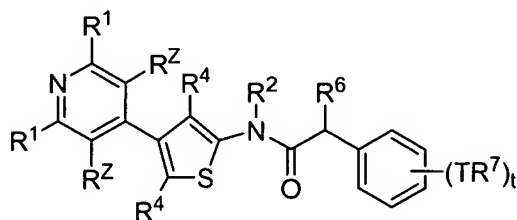
37. (Previously presented) The compound of claim 34 or 35, q is 1, and Ar<sup>1</sup> is optionally substituted phenyl and compounds of general formula **XIV-A** through **XIX-A** are provided:



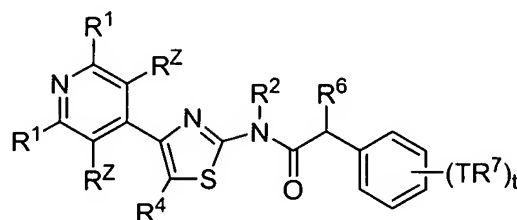
**XIV-A**



**XV-A**

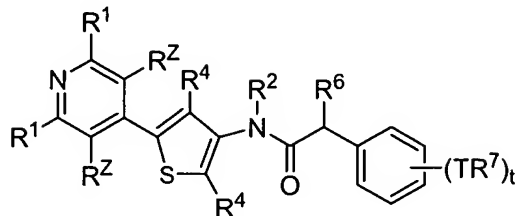


**XVI-A**

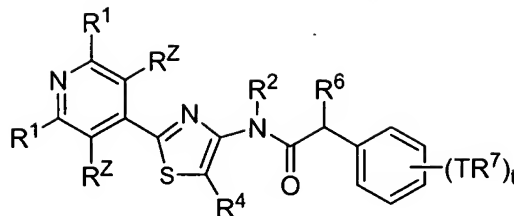


**XVII-A**

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XVIII-A



XIX-A

wherein:

each occurrence of  $R^1$  is hydrogen;

each occurrence of  $R^2$  is hydrogen;

$R^2$  is hydrogen, or is  $U_nR'$ , where  $n$  is 1, and  $U$  is  $-CH_2-$ ,  $-CH_2CH_2-$ ,

$-CH_2CH_2CH_2-$ ,  $-CH_2CH_2CH_2CH_2-$ ,  $-CH_2O-$ ,  $-CH_2S-$ ,  $-CH_2NR-$ ,  $-CH_2CH_2O-$ ,  $-CH_2CH_2S-$ ,  
 $-CH_2CH_2NR-$ ,  $-CH_2CH_2CH_2O-$ ,  $-CH_2CH_2CH_2S-$ ,  $-CH_2CH_2CH_2NR-$ ,

$-CH_2CH_2CH_2CH_2O-$ ,  $-CH_2CH_2CH_2CH_2S-$ ,  $-CH_2CH_2CH_2CH_2NR-$ ,  $-CH_2CH_2OCH_2CH_2-$ ,

$-(CH_2)_4NHCH_2-$ ,  $-(CH_2)_3NHCH_2CH_2-$ , or  $-CH_2CH_2NHCH_2CH_2-$ , and  $R'$  groups are

hydrogen,  $C_1$ - $C_4$ alkyl, optionally substituted tetrahydropyranyl, pyrrolidinyl, piperidinyl,  
 piperazinyl, morpholinyl, thiomorpholinyl, pyridinyl, phenyl, or cyclohexyl, or  $R$  and  $R'$ ,

taken together with the nitrogen atom to which they are bound, form an optionally  
 substituted 5- or 6-membered heterocyclyl ring;

each occurrence of  $R^4$  is independently hydrogen,  $C_{1-6}$ aliphatic, CN, COR,  
 COOR,  $CON(R)_2$ , or halogen;

$R^6$  is  $R'$ ,  $-N(R)(R')$ ,  $-(CH_2)_{1-4}N(R)(R')$ ,  $-OR'$ ,  $-(CH_2)_{1-4}OR'$ ,

$-NR(CH_2)_{1-4}N(R)(R')$ ,  $-NR(CH_2)_{1-4}SO_2R'$ ,  $-NR(CH_2)_{1-4}COOR'$ , or

$-NR(CH_2)_{1-4}COR'$ ; and

$t$  is 0, 1, 2, or 3, and each occurrence of  $TR^7$  is independently  $-C_{1-3}$ alkyl,  $-OR'$ ,  $-$

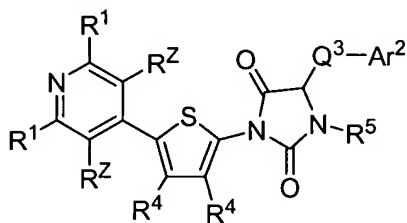
$SR'$ ,  $-CF_3$ ,  $-OCF_3$ ,  $-SCF_3$ ,  $-F$ ,  $-Cl$ ,  $I$ ,  $-Br$ ,  $-COOR'$ ,  $-COR'$ ,  $-O(CH_2)_4N(R)(R')$ ,

$-O(CH_2)_3N(R)(R')$ ,  $-O(CH_2)_2N(R)(R')$ ,  $-O(CH_2)N(R)(R')$ ,  $-O(CH_2)_4CON(R)(R')$ ,

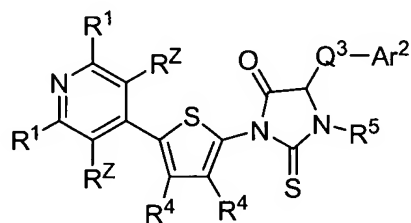
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-O(CH<sub>2</sub>)<sub>3</sub>CON(R)(R'), -O(CH<sub>2</sub>)<sub>2</sub>CON(R)(R'), -O(CH<sub>2</sub>)CON(R)(R'), -C(O)N(R)(R'),  
-(CH<sub>2</sub>)<sub>4</sub>OR', -(CH<sub>2</sub>)<sub>3</sub>OR', -(CH<sub>2</sub>)<sub>2</sub>OR', -CH<sub>2</sub>OR', optionally substituted phenyl or benzyl,  
-N(R)(R'), -(CH<sub>2</sub>)<sub>4</sub>N(R)(R'), -(CH<sub>2</sub>)<sub>3</sub>N(R)(R'), -(CH<sub>2</sub>)<sub>2</sub>N(R)(R'),  
-(CH<sub>2</sub>)N(R)(R'), -SO<sub>2</sub>N(R)(R'), -NRSO<sub>2</sub>R', -CON(R)(R'), or -OSO<sub>2</sub>R'.

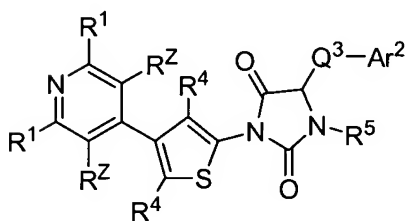
38. (Previously presented) The compound of claim 16, wherein R<sup>2</sup> and Q<sup>1</sup>-R<sup>3</sup>, taken together with the atoms to which they are bound form a 5-membered cyclic group, and compounds have the general formula XX through XXV:



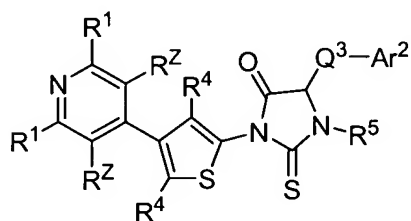
XX



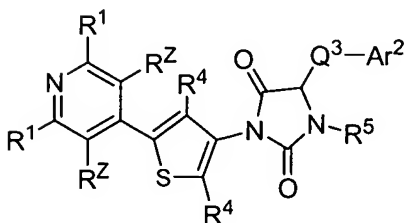
XXI



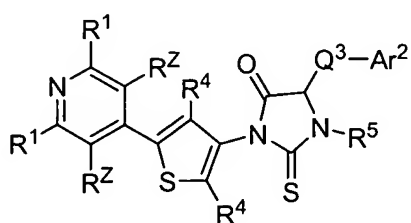
XXII



XXIII



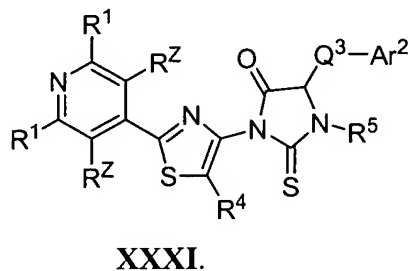
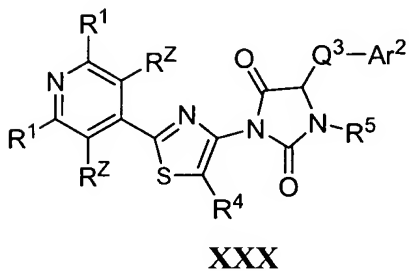
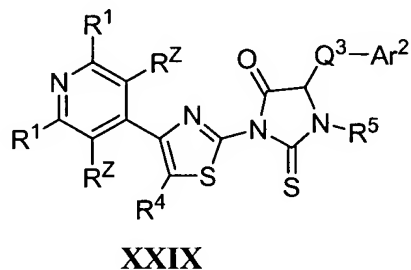
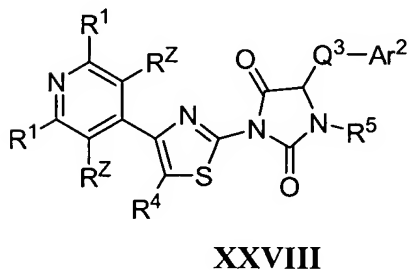
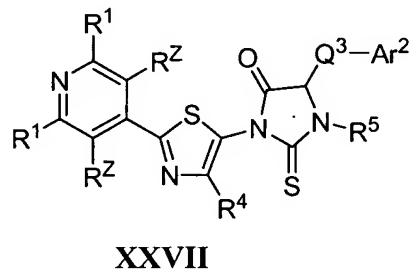
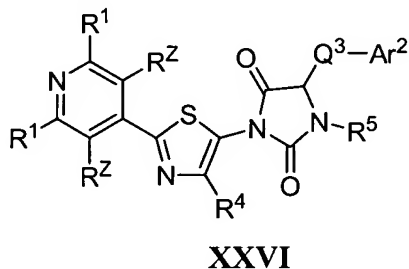
XXIV



XXV.

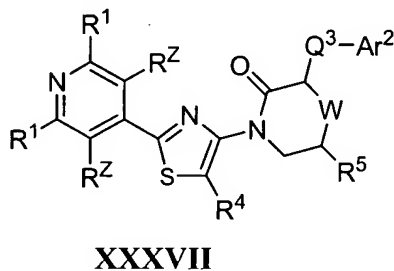
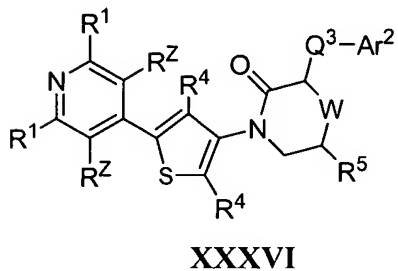
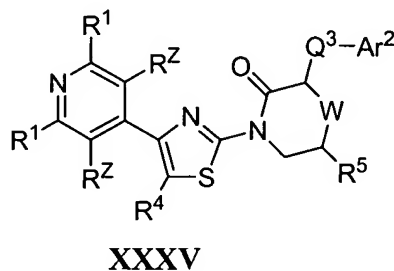
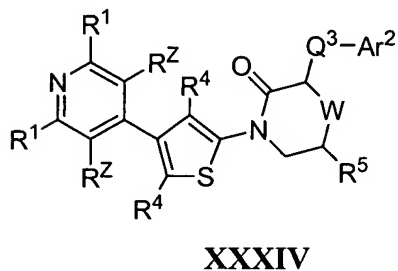
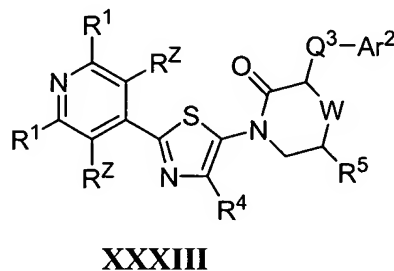
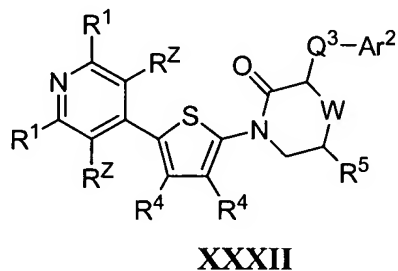
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39.     (Previously presented) The compound of claim 16,  $R^2$  and  $Q^1-R^3$ , taken together with the atoms to which they are bound form a 5-membered cyclic group, and compounds have the general formula **XXVI** through **XXXI**:



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40. (Previously presented) The compound of claim 16, wherein  $R^2$  and  $Q^1-R^3$ , taken together with the atoms to which they are bound form a 6-membered cyclic group, and compounds have the general formula XXXII through XXXVII:



wherein W is O,  $NR^5$ , or  $CHR^5$ .

41. (Original) The compound of claims 38, 39 or 40, wherein compound variables are selected from one of more of the following groups:

a) each occurrence of  $R^1$  is independently hydrogen, halogen, optionally substituted  $C_1$ - $C_4$ aliphatic, OR, SR, or  $N(R)_2$ ;

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b) each occurrence of  $R^Z$  is independently hydrogen, halogen, optionally substituted  $C_1$ - $C_4$ aliphatic, OH, OR' or N(R)(R');

c) each occurrence of  $R^4$  is independently hydrogen,  $C_1$ - $C_6$ aliphatic, CN, COR, COOR, CON(R)<sub>2</sub>, or halogen;

d)  $R^5$  is hydrogen,  $(CH_2)_3OR'$ ,  $(CH_2)_2OR'$ ,  $(CH_2)OR'$ ,  $(CH_2)_3N(R')_2$ ,  $(CH_2)_2N(R')_2$ ,  $(CH_2)N(R')_2$ , or  $C_1$ - $C_4$ aliphatic;

e)  $Q^3$  is a direct bond, or is  $-(CHR^6)_q-$ ,  $-(CHR^6)_qO-$ ,  $-(CHR^6)_qS-$ ,  $-(CHR^6)_qS(O)_2-$ ,  $-(CHR^6)_qS(O)-$ ,  $-(CHR^6)_qNR-$ , or  $-(CHR^6)_qC(O)-$ , wherein q is 0, 1, 2, or 3; and

f)  $Ar^2$  is ring **a**, **b**, **e**, **g**, **h**, **i**, **j**, **k**, **n**, **r**, **cc**, **dd**, **ff**, **jj**, **ll**, or **pp**, wherein t is 0, 1, 2, or 3, and T is a bond or is an optionally substituted  $C_{1-6}$  alkylidene chain wherein one or two methylene units are optionally and independently replaced by  $-O-$ ,  $-NR-$ ,  $-S-$ ,  $-SO_2-$ ,  $-COO-$ ,  $-CO-$ ,  $-OSO_2-$ ,  $-NRSO_2-$ ,  $-CONR-$ , or  $-SO_2NR-$ , and  $R^7$  is R' or halogen.

42. (Previously presented) The compound of claims 38, 39 or 40, wherein compound variables are selected from one of more of the following groups:

a) each occurrence of  $R^1$  is independently hydrogen, halogen,  $-CH_3$ ,  $-CH_2CH_3$ ,  $-OH$ ,  $-OCH_3$ ,  $-SCH_3$ ,  $-NH_2$ ,  $-N(CH_3)_2$ ,  $-N(CH_2CH_3)_2$ ,  $NH(CH_2)_2NHCH_3$ ,  $NH(cyclopropyl)$ ,  $NH(CH_2)cyclopropyl$ , or  $NH(CH_2)_2N(CH_3)_2$ ;

b) each occurrence of  $R^Z$  is independently hydrogen, halogen, Me, OH, OMe,  $NH_2$ , or  $N(Me)_2$ ;

c) each occurrence of  $R^4$  is independently hydrogen,  $C_1$ - $C_6$ aliphatic, CN, COR, COOR, CON(R)<sub>2</sub>, or halogen;

d)  $R^5$  is hydrogen,  $(CH_2)_3OR'$ ,  $(CH_2)_2OR'$ ,  $(CH_2)OR'$ ,  $(CH_2)_3N(R')_2$ ,  $(CH_2)_2N(R')_2$ ,  $(CH_2)N(R')_2$ , or  $C_1$ - $C_4$ aliphatic;

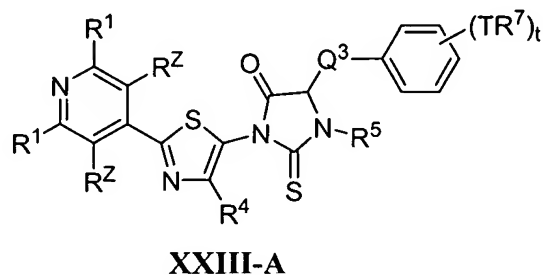
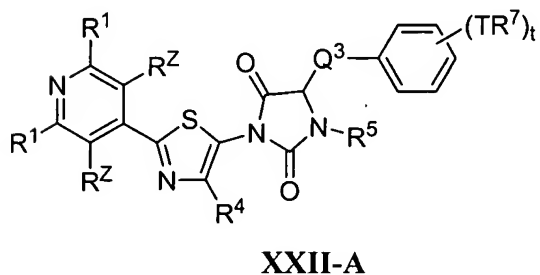
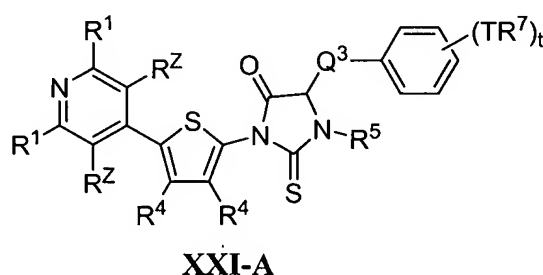
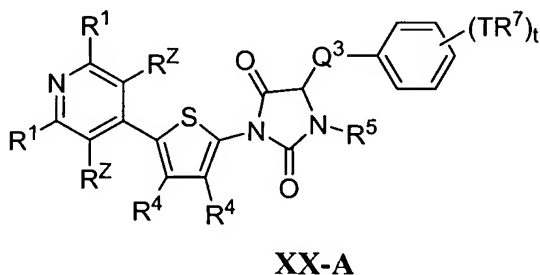
e)  $Q^3$  is a direct bond, or is  $-(CHR^6)_q-$ ,  $-(CHR^6)_qO-$ ,  $-(CHR^6)_qS-$ ,  $-(CHR^6)_qS(O)_2-$ ,  $-(CHR^6)_qS(O)-$ ,  $-(CHR^6)_qNR-$ , or  $-(CHR^6)_qC(O)-$ , wherein q is 0, 1, 2, or 3; and



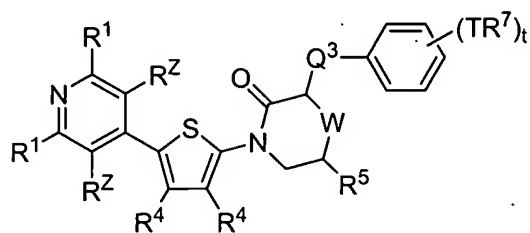
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f)  $\text{Ar}^2$  is ring **a**, **b**, **e**, **g**, **h**, **i**, **j**, **k**, **n**, **r**, **cc**, **dd**, **ff**, **jj**, **ll**, or **pp**, wherein  $t$  is 0, 1, 2, or 3, and each occurrence of  $\text{TR}^7$  is independently  $-\text{C}_{1-3}\text{alkyl}$ ,  $-\text{OR}'$ ,  $-\text{SR}'$ ,  $-\text{CF}_3$ ,  $-\text{OCF}_3$ ,  $-\text{SCF}_3$ ,  $-\text{F}$ ,  $-\text{Cl}$ ,  $\text{I}$ ,  $-\text{Br}$ ,  $-\text{COOR}'$ ,  $-\text{COR}'$ ,  $-\text{O}(\text{CH}_2)_4\text{N}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)_3\text{N}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)_2\text{N}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)\text{N}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)_4\text{CON}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)_3\text{CON}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)_2\text{CON}(\text{R})(\text{R}')$ ,  $-\text{O}(\text{CH}_2)\text{CON}(\text{R})(\text{R}')$ ,  $-\text{C}(\text{O})\text{N}(\text{R})(\text{R}')$ ,  $-(\text{CH}_2)_4\text{OR}'$ ,  $-(\text{CH}_2)_3\text{OR}'$ ,  $-(\text{CH}_2)_2\text{OR}'$ ,  $-\text{CH}_2\text{OR}'$ , optionally substituted phenyl or benzyl,  $-\text{N}(\text{R})(\text{R}')$ ,  $-(\text{CH}_2)_4\text{N}(\text{R})(\text{R}')$ ,  $-(\text{CH}_2)_3\text{N}(\text{R})(\text{R}')$ ,  $-(\text{CH}_2)_2\text{N}(\text{R})(\text{R}')$ ,  $-(\text{CH}_2)\text{N}(\text{R})(\text{R}')$ ,  $-\text{SO}_2\text{N}(\text{R})(\text{R}')$ ,  $-\text{NRSO}_2\text{R}'$ ,  $-\text{CON}(\text{R})(\text{R}')$ , or  $-\text{OSO}_2\text{R}'$ .

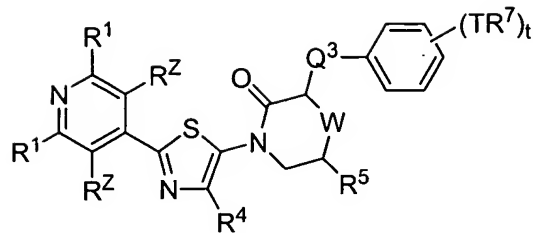
43. (Previously presented) The compound of claims 38, 39 or 40, wherein  $\text{Ar}^2$  is optionally substituted phenyl and compounds of general formula **XX-A**, through **XXXVII** are provided:



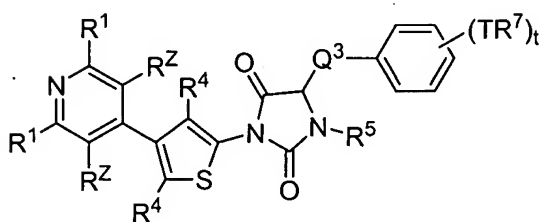
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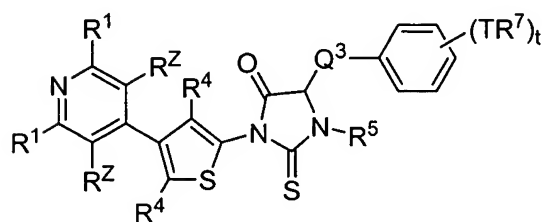
XXIV-A



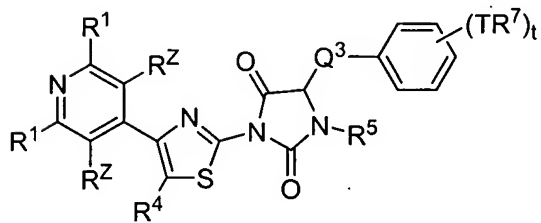
XXV-A



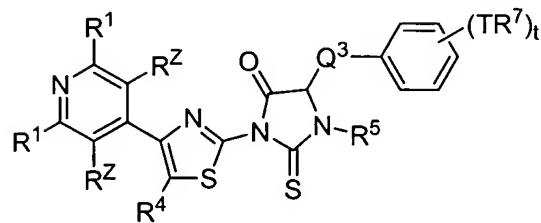
XXVI-A



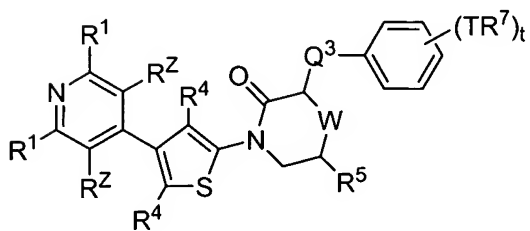
XXVII-A



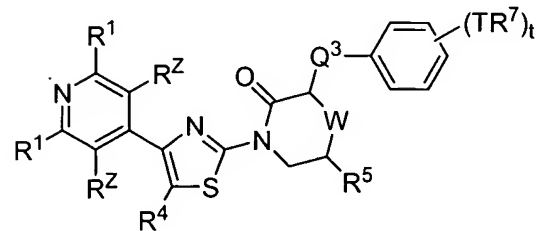
XXVIII-A



XXIX-A

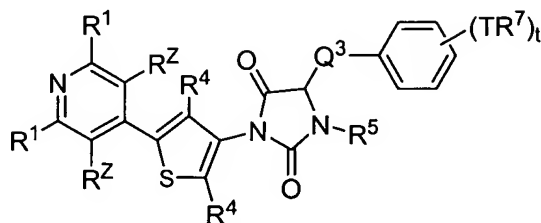


XXX-A

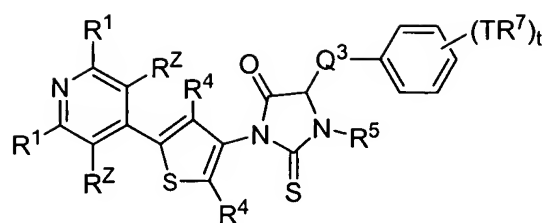


XXXI-A

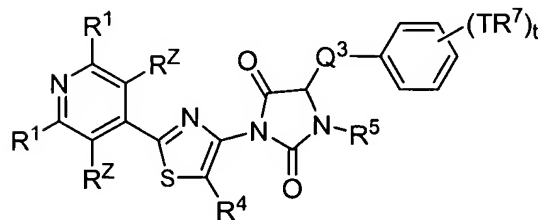
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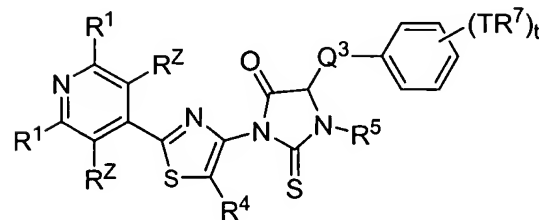
XXXII-A



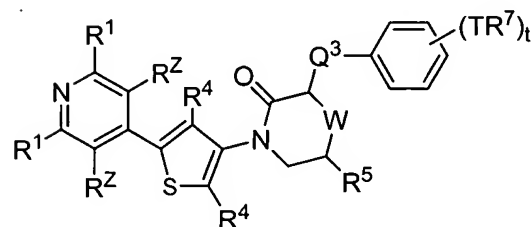
XXXIII-A



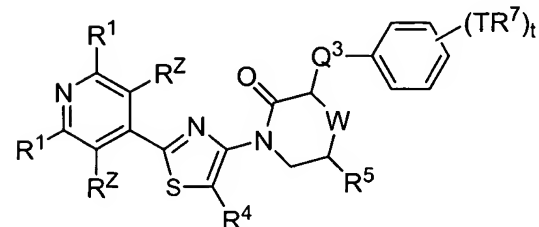
XXXIV-A



XXXV-A



XXXVI-A



XXXVII-A.

44. (Previously presented) The compound of claim 43, wherein compound variables are selected from:

each occurrence of  $R^1$  is hydrogen;

each occurrence of  $R^Z$  is hydrogen;

each occurrence of  $R^4$  is independently hydrogen,  $C_{1-6}$ aliphatic, CN, COR, COOR, CON(R)<sub>2</sub>, or halogen;

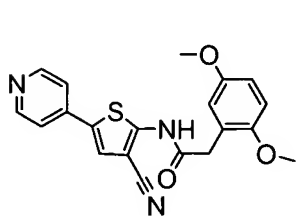
$R^5$  is hydrogen,  $(CH_2)_3OR'$ ,  $(CH_2)_2OR'$ ,  $(CH_2)OR'$ ,  $(CH_2)_3N(R')_2$ ,  $(CH_2)_2N(R')_2$ ,  $(CH_2)N(R')_2$ , or  $C_{1-4}$ aliphatic;

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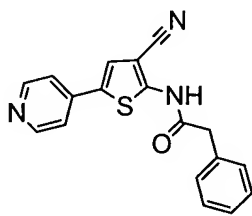
$Q^3$  is a direct bond, or is  $-(CHR^6)_q-$ ,  $-(CHR^6)_qO-$ ,  $-(CHR^6)_qS-$ ,  $-(CHR^6)_qS(O)_2-$ ,  $-(CHR^6)_qS(O)-$ ,  $-(CHR^6)_qNR-$ , or  $-(CHR^6)_qC(O)-$ , wherein  $q$  is 0, 1, 2, or 3; and

$t$  is 0, 1, 2, or 3, and each occurrence of  $TR^7$  is independently  $-C_{1-3}alkyl$ ,  $-OR'$ ,  $-SR'$ ,  $-CF_3$ ,  $-OCF_3$ ,  $-SCF_3$ ,  $-F$ ,  $-Cl$ ,  $I$ ,  $-Br$ ,  $-COOR'$ ,  $-COR'$ ,  $-O(CH_2)_4N(R)(R')$ ,  $-O(CH_2)_3N(R)(R')$ ,  $-O(CH_2)_2N(R)(R')$ ,  $-O(CH_2)N(R)(R')$ ,  $-O(CH_2)_4CON(R)(R')$ ,  $-O(CH_2)_3CON(R)(R')$ ,  $-O(CH_2)_2CON(R)(R')$ ,  $-O(CH_2)CON(R)(R')$ ,  $-C(O)N(R)(R')$ ,  $-(CH_2)_4OR'$ ,  $-(CH_2)_3OR'$ ,  $-(CH_2)_2OR'$ ,  $-CH_2OR'$ , optionally substituted phenyl or benzyl,  $-N(R)(R')$ ,  $-(CH_2)_4N(R)(R')$ ,  $-(CH_2)_3N(R)(R')$ ,  $-(CH_2)_2N(R)(R')$ ,  $-(CH_2)N(R)(R')$ ,  $-SO_2N(R)(R')$ ,  $-NRSO_2R'$ ,  $-CON(R)(R')$ , or  $-OSO_2R'$ .

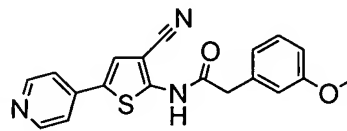
45. (Currently amended) The compound of claim 1, having one of the structures:



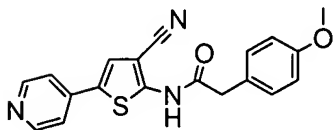
I-A-1



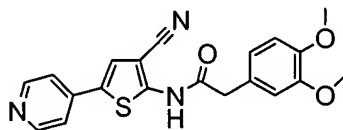
I-A-2



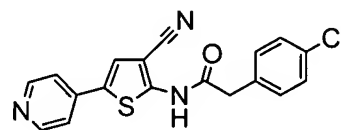
I-A-3



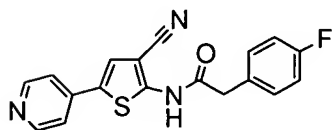
I-A-4



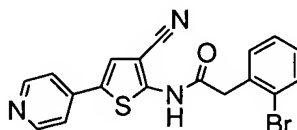
I-A-5



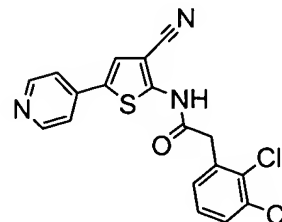
I-A-6



I-A-7

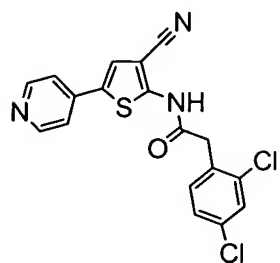


I-A-8

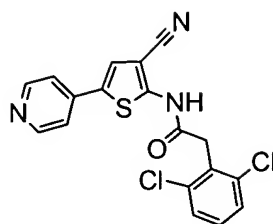


I-A-9

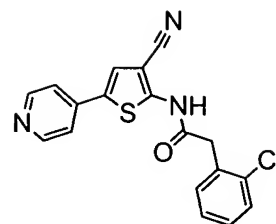
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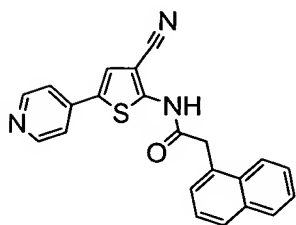
**I-A-10**



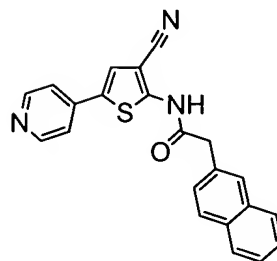
**I-A-11**



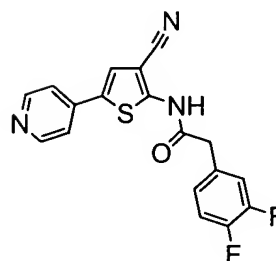
**I-A-12**



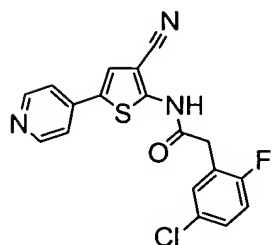
**I-A-13**



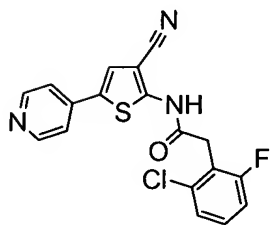
**I-A-14**



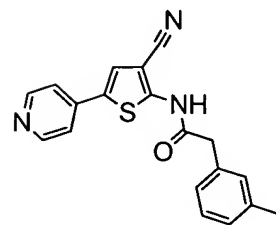
**I-A-15**



**I-A-16**

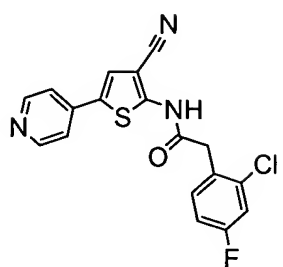


**I-A-17**

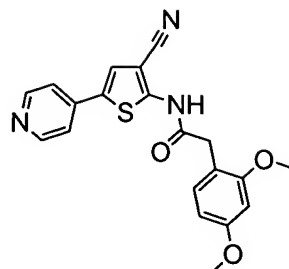


**I-A-18**

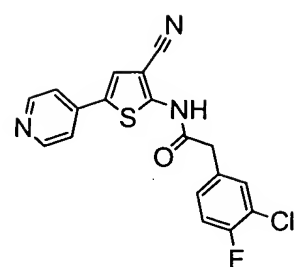
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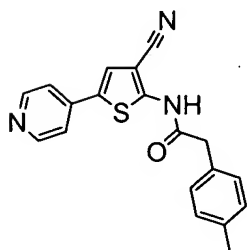
I-A-19



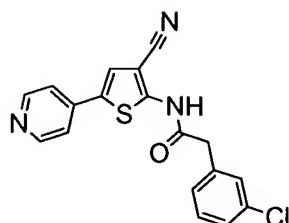
I-A-20



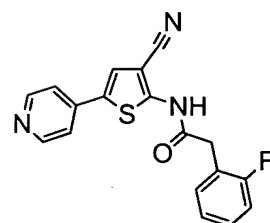
I-A-21



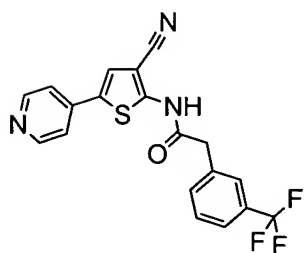
I-A-22



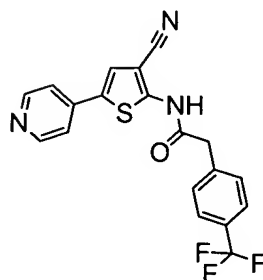
I-A-23



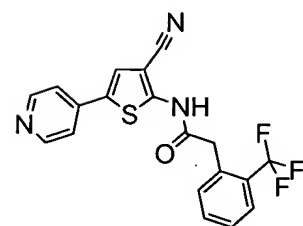
I-A-24



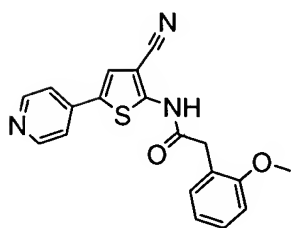
I-A-25



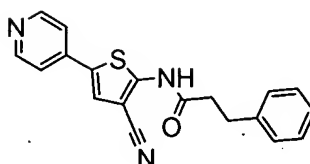
I-A-26



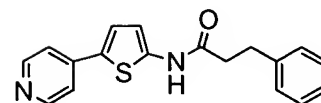
I-A-27



I-A-28

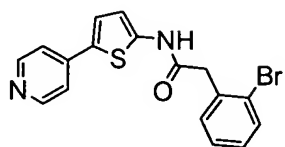


I-A-29

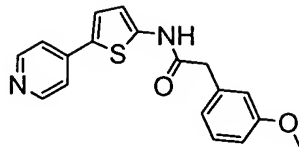


I-A-30

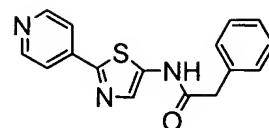
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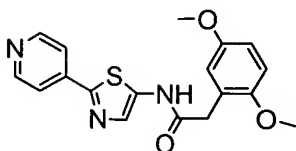
**I-A-31**



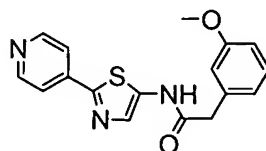
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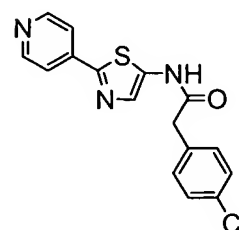
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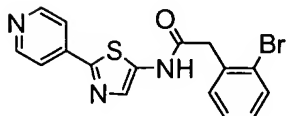
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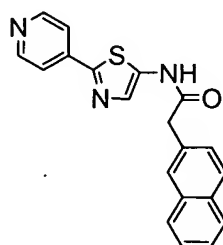
**I-A-35**



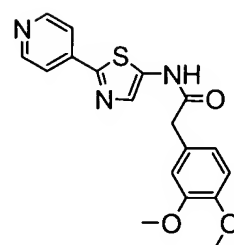
**I-A-36**



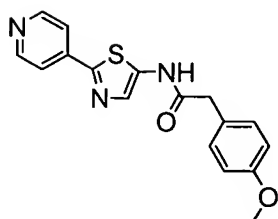
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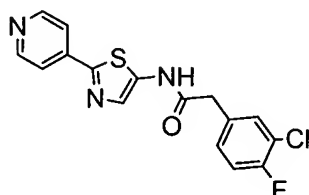
**I-A-38**



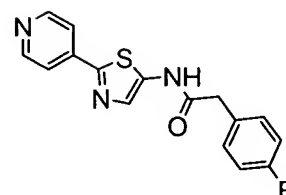
**I-A-39**



**I-A-40**

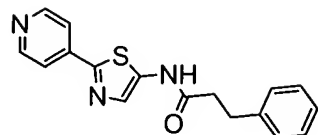


**I-A-41**

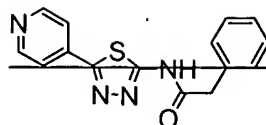


**I-A-42**

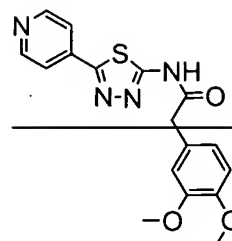
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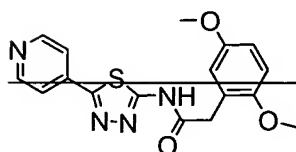
I-A-43



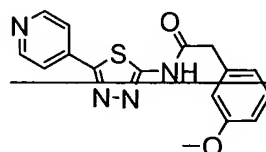
I-A-44



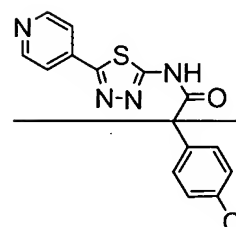
I-A-45



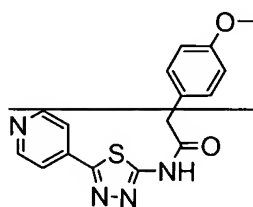
I-A-46



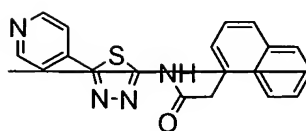
I-A-47



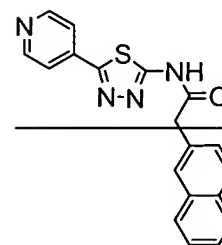
I-A-48



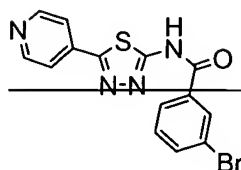
I-A-49



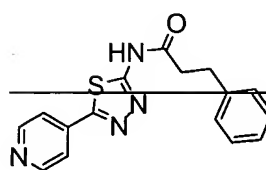
I-A-50



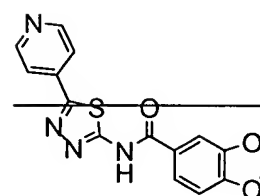
I-A-51



I-A-52



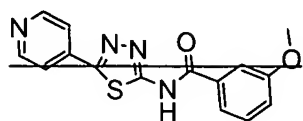
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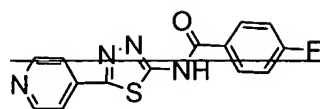
I-A-54



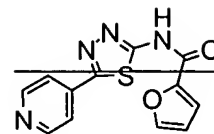
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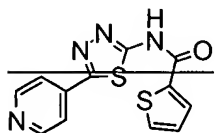
**I-A-55**



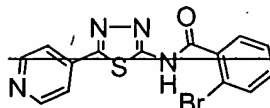
**I-A-56**



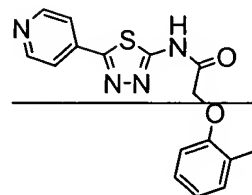
**I-A-57**



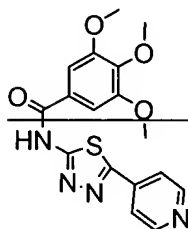
**I-A-58**



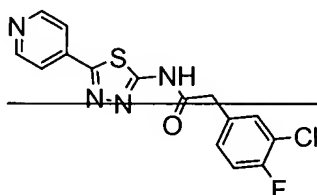
**I-A-59**



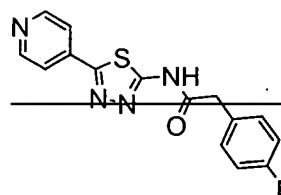
**I-A-60**



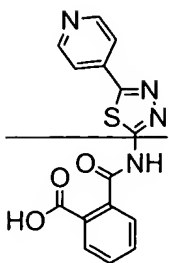
**I-A-61**



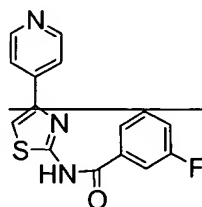
**I-A-62**



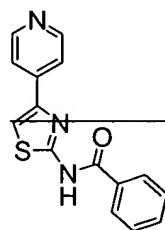
**I-A-63**



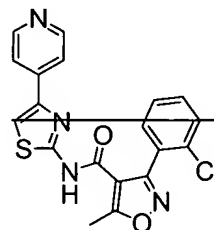
**I-A-64**



**I-B-1**

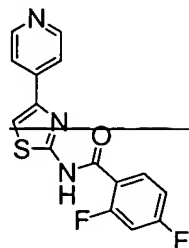


**I-B-2**

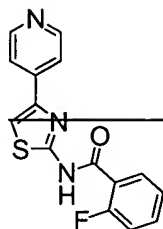


**I-B-3**

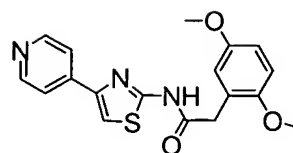
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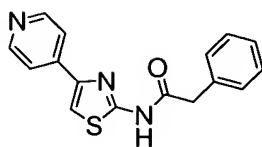
**I-B-4**



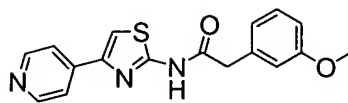
**I-B-5**



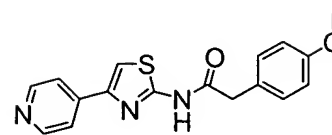
**I-B-6**



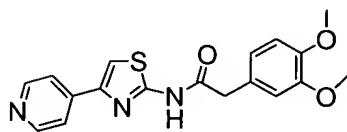
**I-B-19**



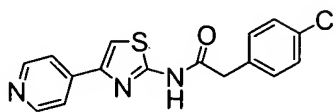
**I-B-20**



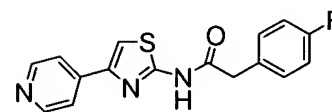
**I-B-21**



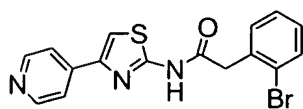
**I-B-22**



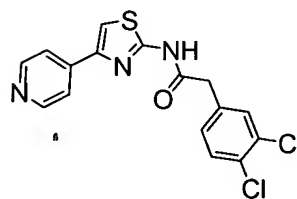
**I-B-23**



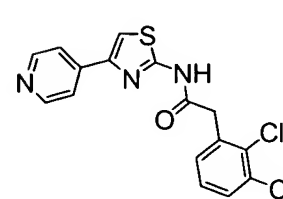
**I-B-24**



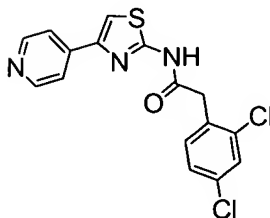
**I-B-25**



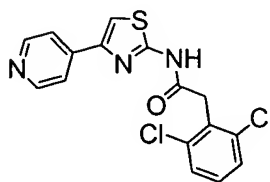
**I-B-26**



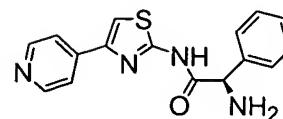
**I-B-27**



**I-B-28**

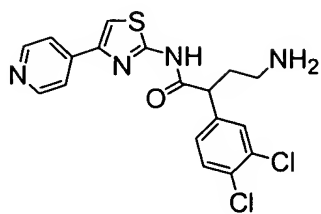


**I-B-29**

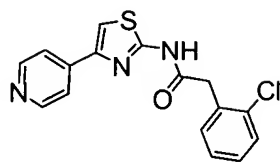


**I-B-30**

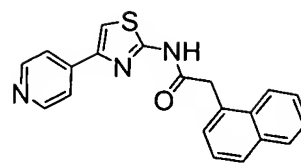
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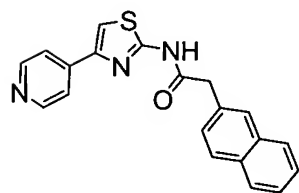
**I-B-31**



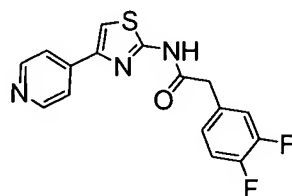
**I-B-32**



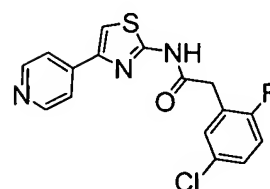
**I-B-33**



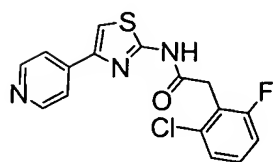
**I-B-34**



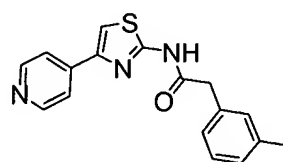
**I-B-35**



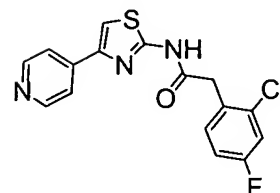
**I-B-36**



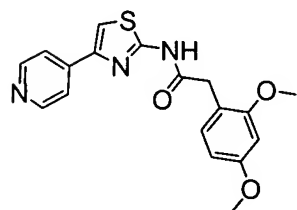
**I-B-37**



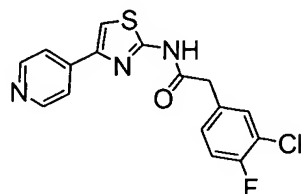
**I-B-38**



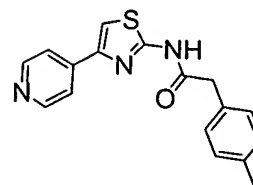
**I-B-39**



**I-B-40**

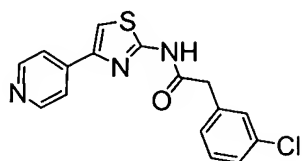


**I-B-41**

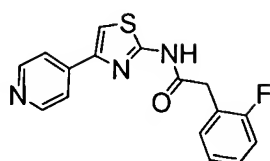


**I-B-42**

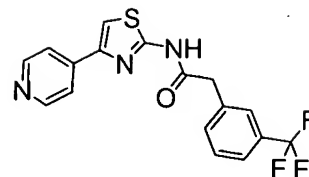
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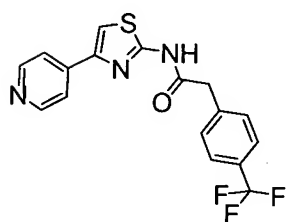
**I-B-43**



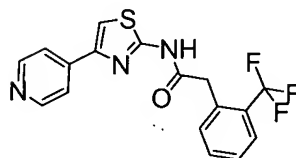
**I-B-44**



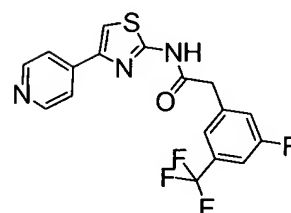
**I-B-45**



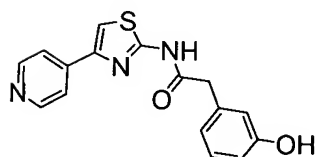
**I-B-46**



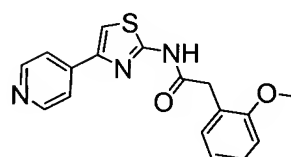
**I-B-47**



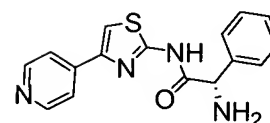
**I-B-48**



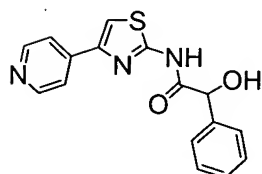
**I-B-49**



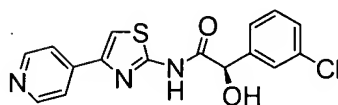
**I-B-50**



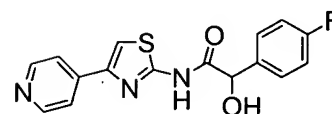
**I-B-51**



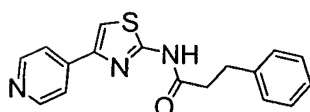
**I-B-52**



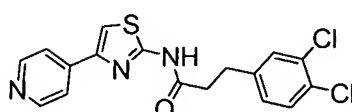
**I-B-53**



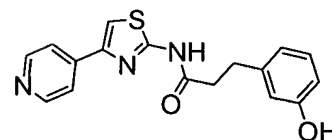
**I-B-54**



**I-B-55**

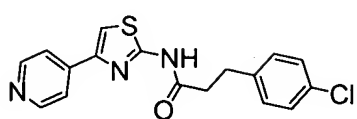


**I-B-56**

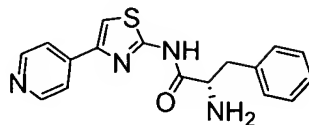


**I-B-57**

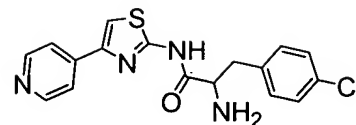
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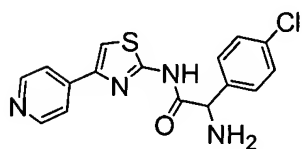
**I-B-58**



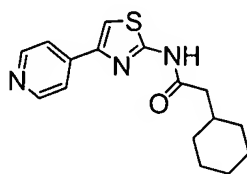
**I-B-59**



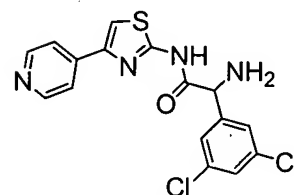
**I-B-60**



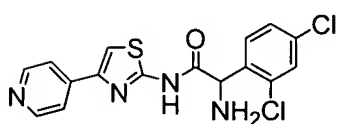
**I-B-61**



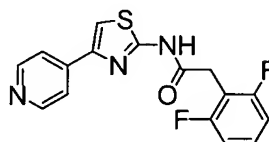
**I-B-62**



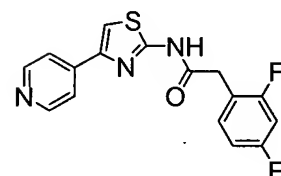
**I-B-63**



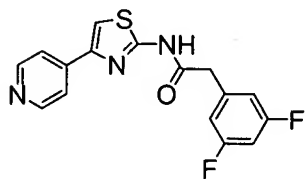
**I-B-64**



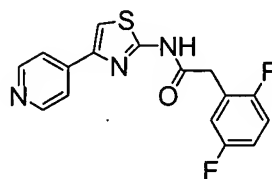
**I-B-65**



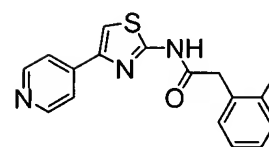
**I-B-66**



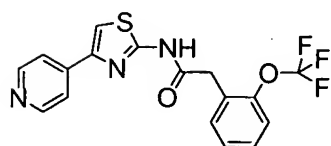
**I-B-67**



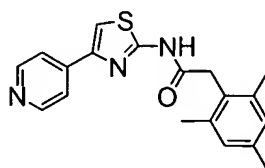
**I-B-68**



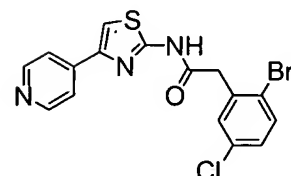
**I-B-69**



**I-B-70**

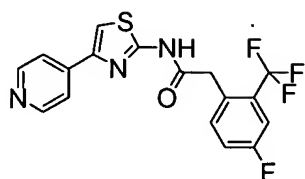


**I-B-71**

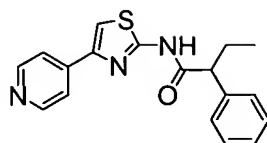


**I-B-72**

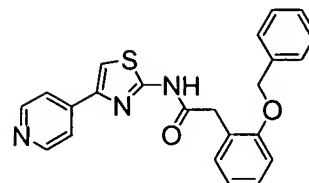
Applicants:           Jingrong Cao et al.  
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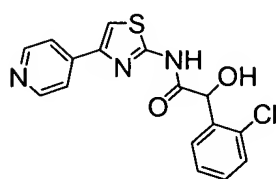
**I-B-73**



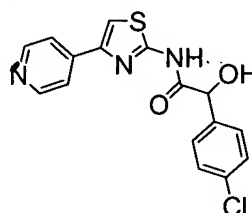
**I-B-74**



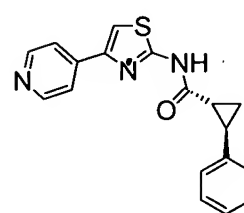
**I-B-75**



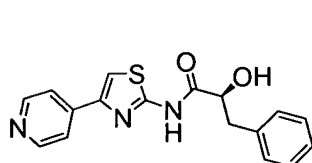
**I-B-76**



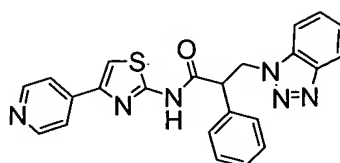
**I-B-77**



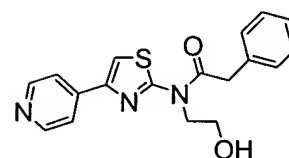
**I-B-78**



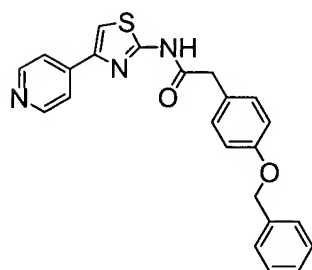
**I-B-79**



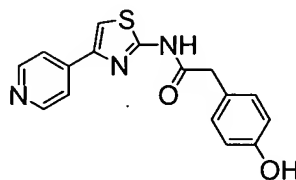
**I-B-80**



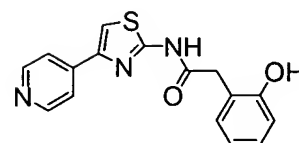
**I-B-81**



**I-B-82**

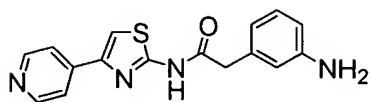


**I-B-83**

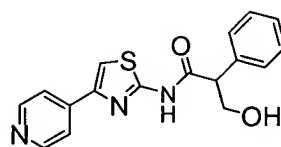


**I-B-84**

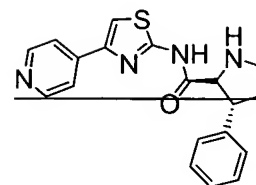
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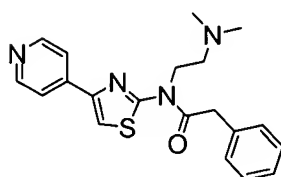
**I-B-85**



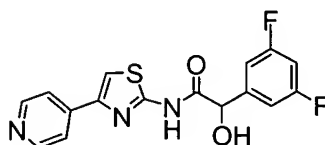
**I-B-86**



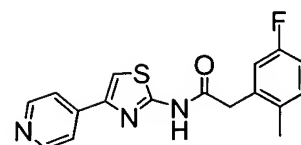
**I-B-87**



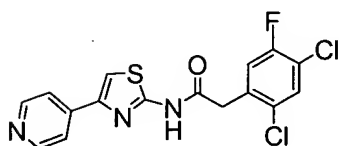
**I-B-88**



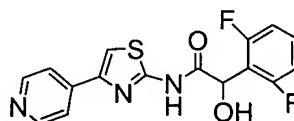
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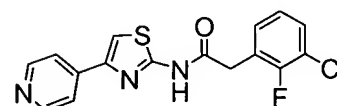
**I-B-90**



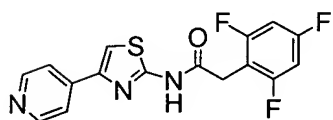
**I-B-91**



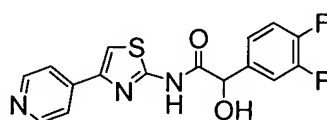
**I-B-92**



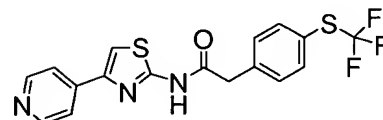
**I-B-93**



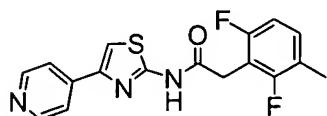
**I-B-94**



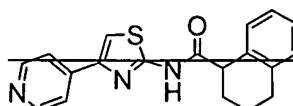
**I-B-95**



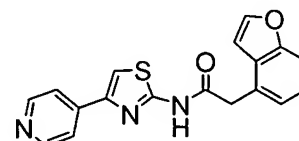
**I-B-96**



**I-B-97**

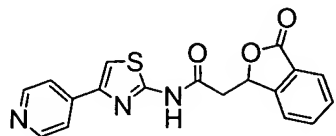


**I-B-98**

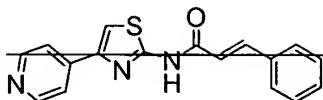


**I-B-99**

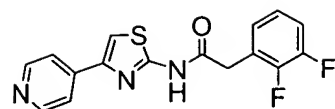
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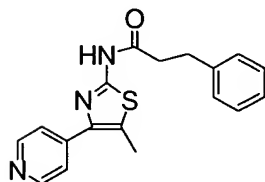
**I-B-100**



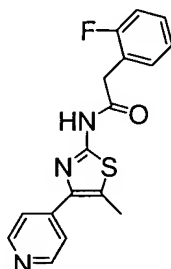
**I-B-101**



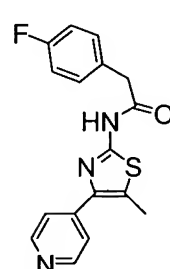
**I-B-102**



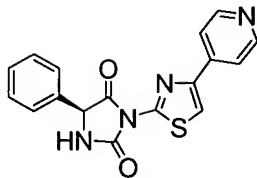
**I-B-103**



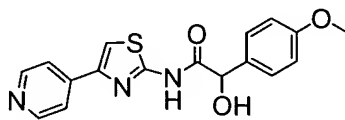
**I-B-104**



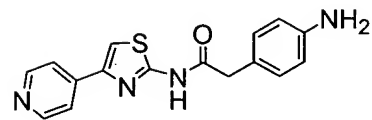
**I-B-105**



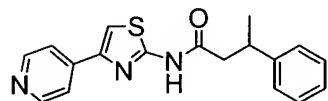
**I-B-106**



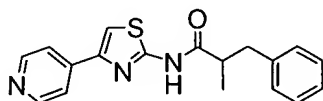
**I-B-107**



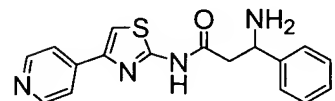
**I-B-108**



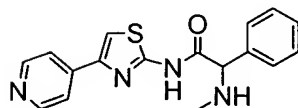
**I-B-109**



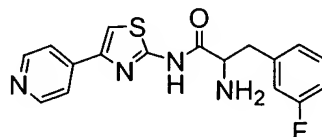
**I-B-110**



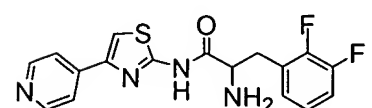
**I-B-111**



**I-B-112**



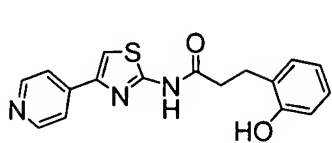
**I-B-113**



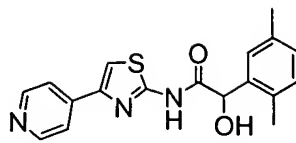
**I-B-114**



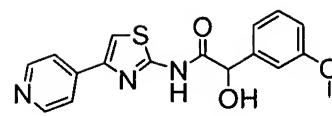
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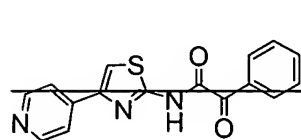
**I-B-115**



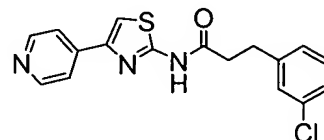
**I-B-116**



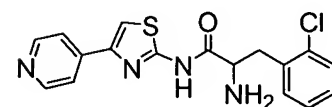
**I-B-117**



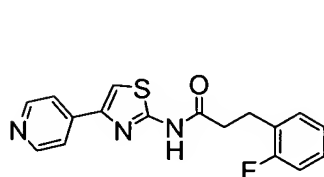
**I-B-118**



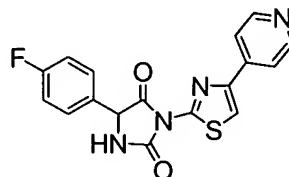
**I-B-119**



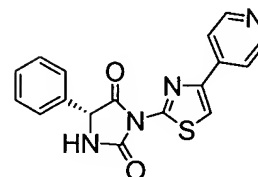
**I-B-120**



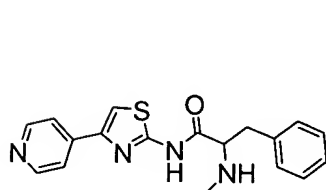
**I-B-121**



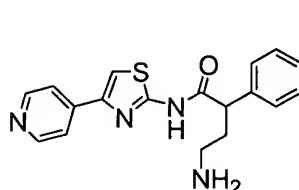
**I-B-122**



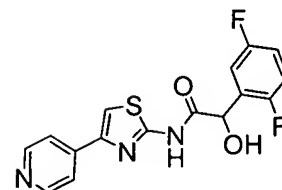
**I-B-123**



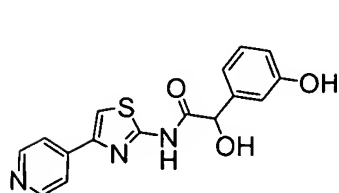
**I-B-124**



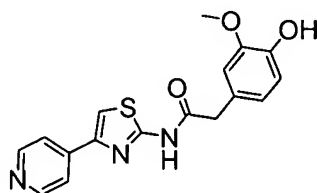
**I-B-125**



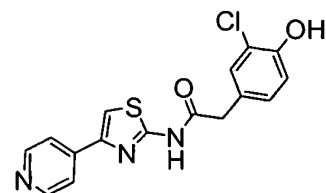
**I-B-126**



**I-B-127**

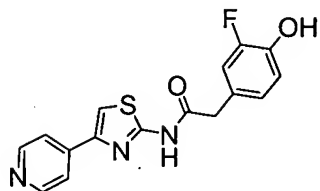


**I-B-128**

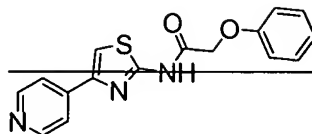


**I-B-129**

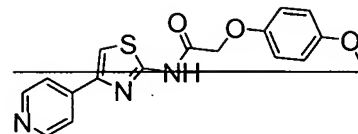
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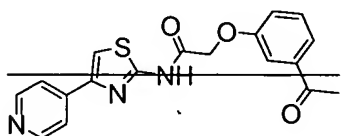
**I-B-130**



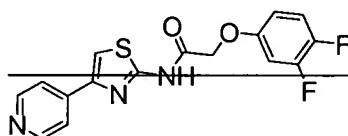
**I-B-131**



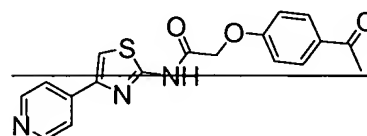
**I-B-132**



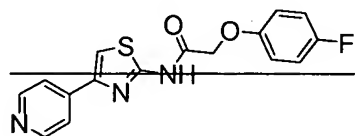
**I-B-133**



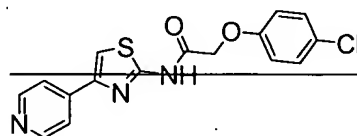
**I-B-134**



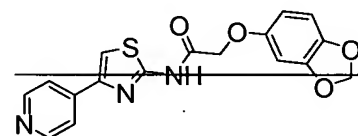
**I-B-135**



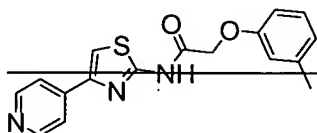
**I-B-136**



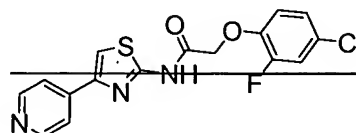
**I-B-137**



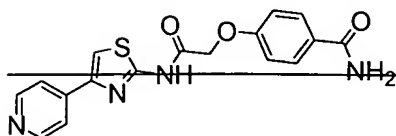
**I-B-138**



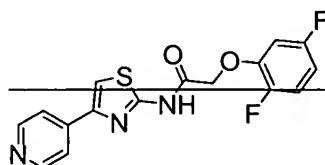
**I-B-141**



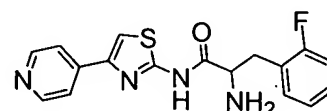
**I-B-142**



**I-B-143**

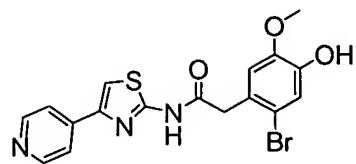


**I-B-144**

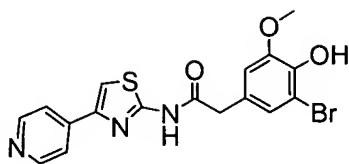


**I-B-146**

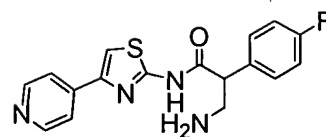
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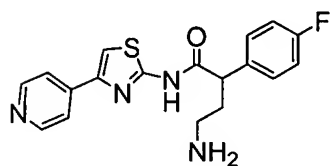
**I-B-148**



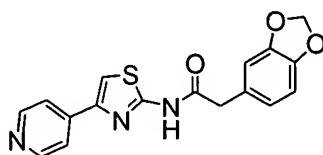
**I-B-149**



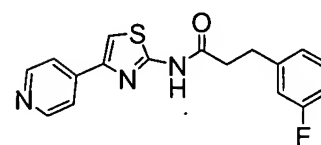
**I-B-150**



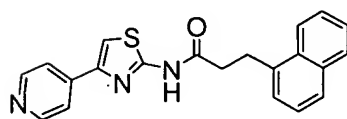
**I-B-151**



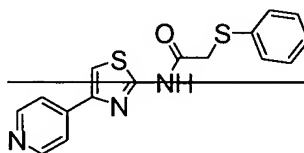
**I-B-152**



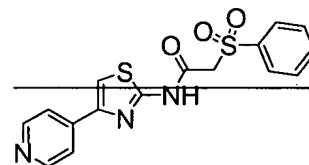
**I-B-153**



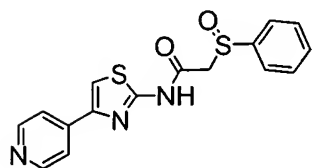
**I-B-154**



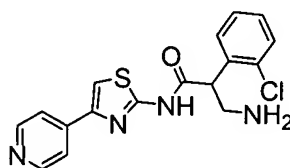
**I-B-155**



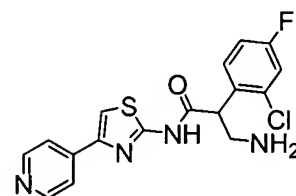
**I-B-156**



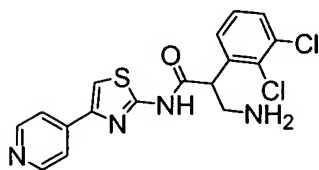
**I-B-157**



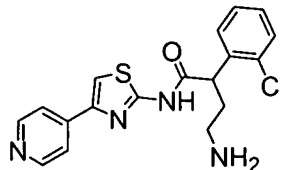
**I-B-158**



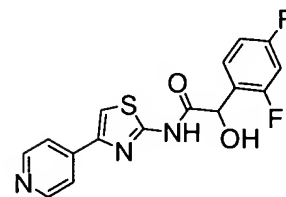
**I-B-159**



**I-B-160**

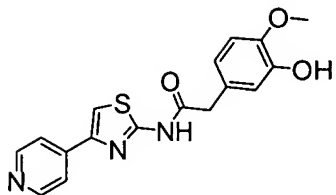


**I-B-161**

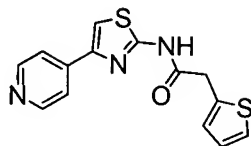


**I-B-162**

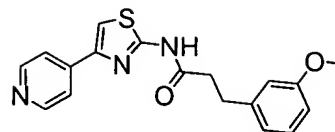
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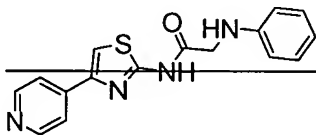
**I-B-163**



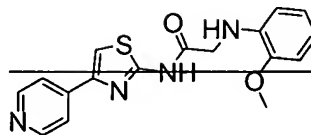
**I-B-164**



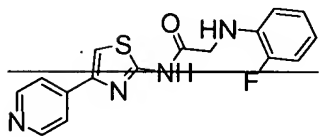
**I-B-165**



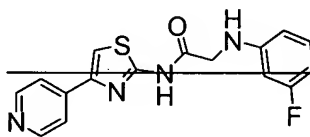
**I-B-167**



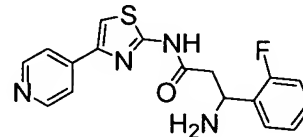
**I-B-168**



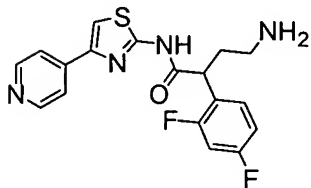
**I-B-169**



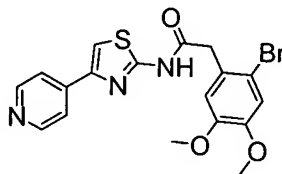
**I-B-170**



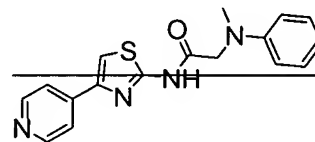
**I-B-171**



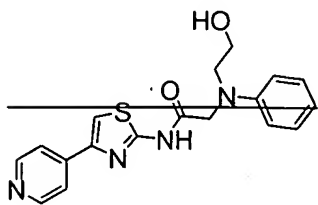
**I-B-175**



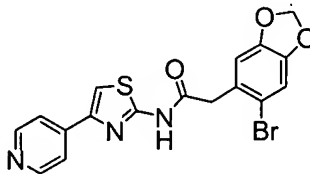
**I-B-176**



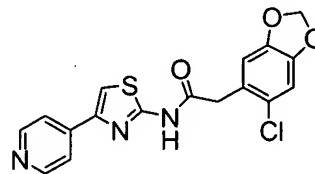
**I-B-177**



**I-B-178**

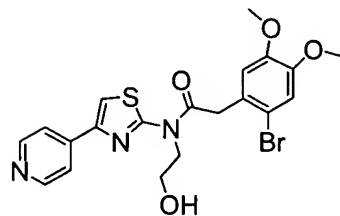


**I-B-179**

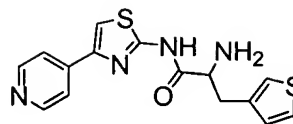


**I-B-180**

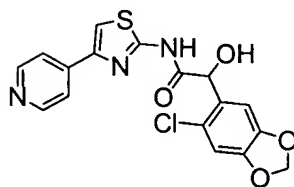
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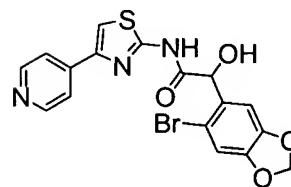
**I-B-181**



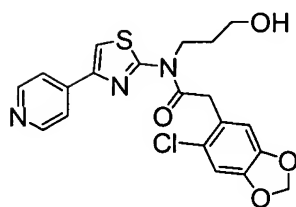
**I-B-182**



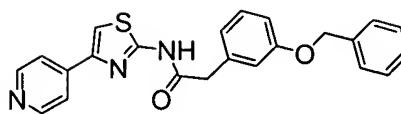
**I-B-185**



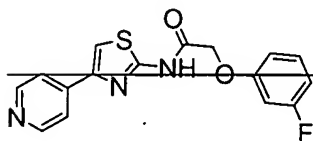
**I-B-186**



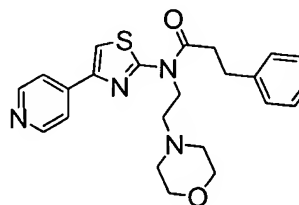
**I-B-187**



**I-B-190**

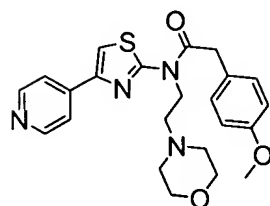


**I-B-191**

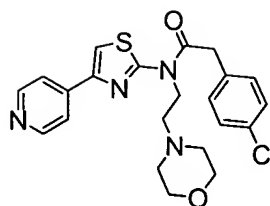


**I-B-192**

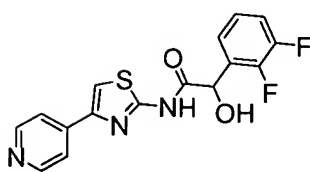
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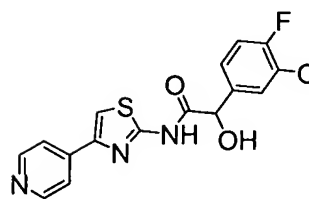
**I-B-193**



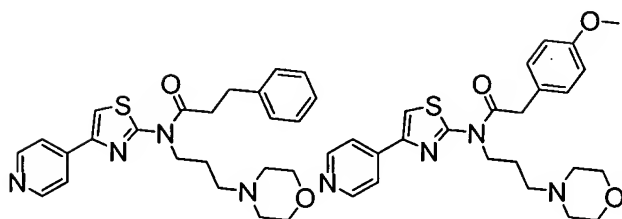
**I-B-194**



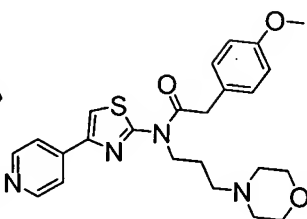
**I-B-197**



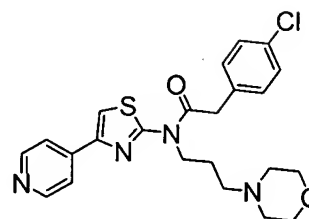
**I-B-198**



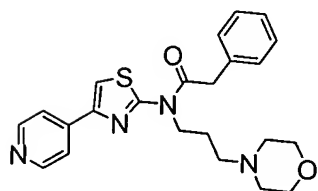
**I-B-199**



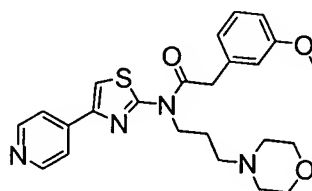
**I-B-200**



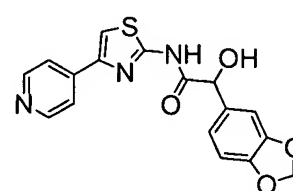
**I-B-201**



**I-B-202**

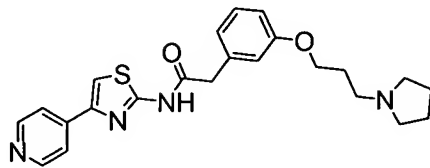


**I-B-203**

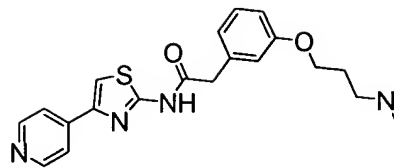


**I-B-204**

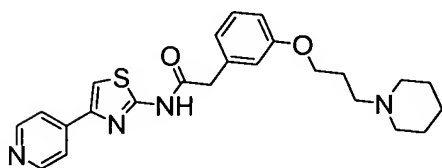
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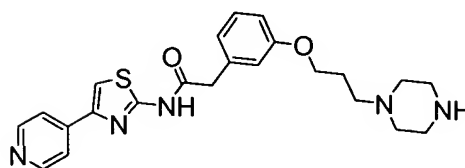
**I-B-205**



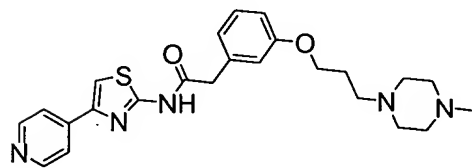
**I-B-206**



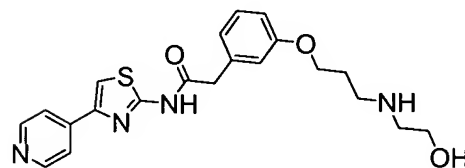
**I-B-207**



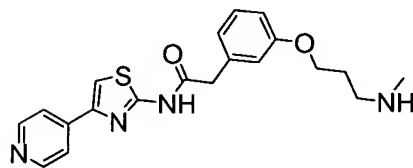
**I-B-208**



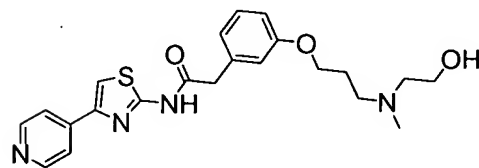
**I-B-209**



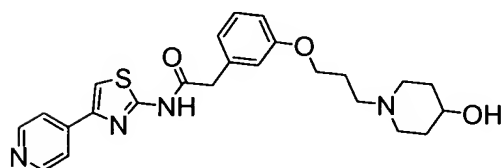
**I-B-210**



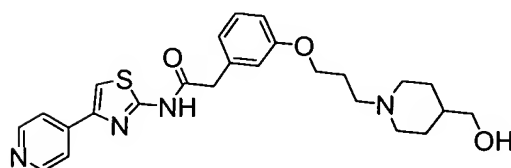
**I-B-211**



**I-B-212**

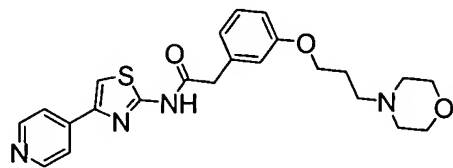


**I-B-213**

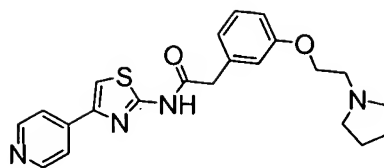


**I-B-214**

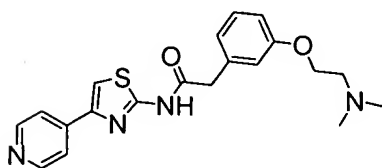
Applicants: Jingrong Cao et al.  
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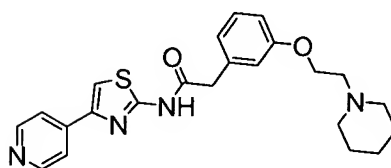
**I-B-215**



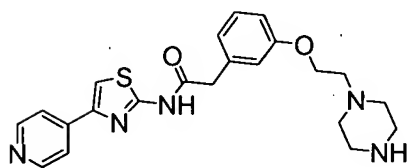
**I-B-216**



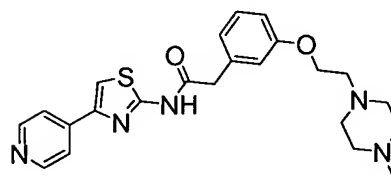
**I-B-217**



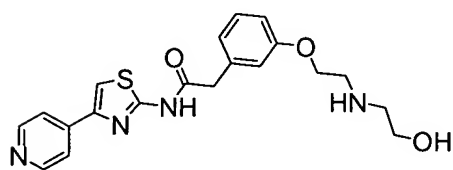
**I-B-218**



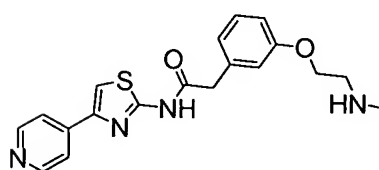
**I-B-219**



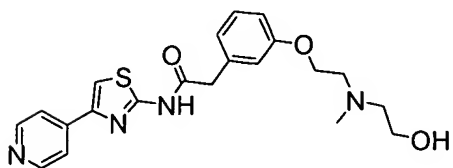
**I-B-220**



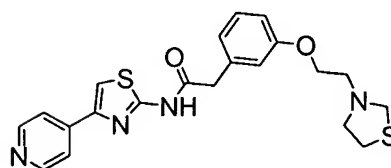
**I-B-221**



**I-B-222**



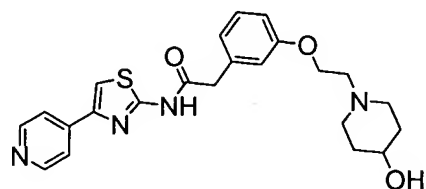
**I-B-223**



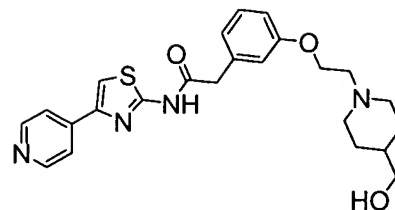
**I-B-224**



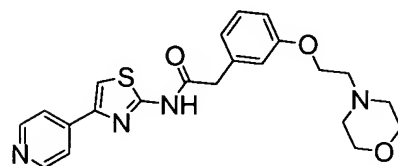
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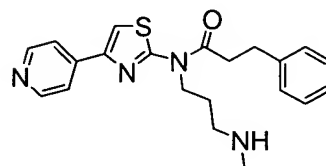
**I-B-225**



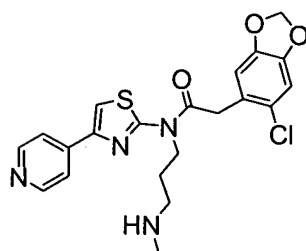
**I-B-226**



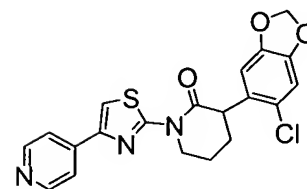
**I-B-227**



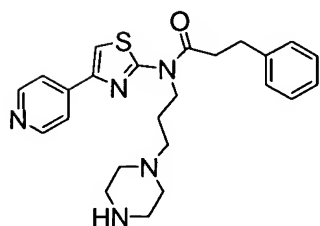
**I-B-228**



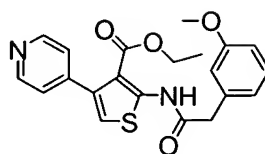
**I-B-229**



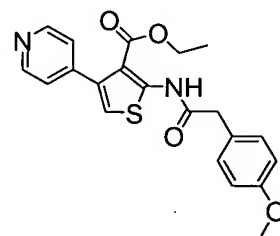
**I-B-230**



**I-B-231**

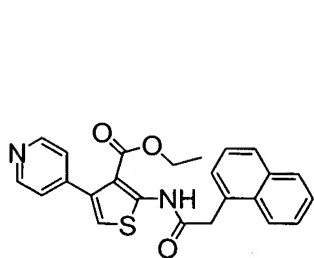


**I-B-232**

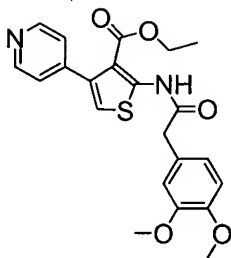


**I-B-233**

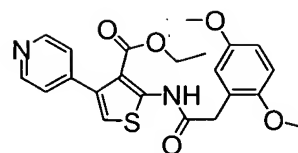
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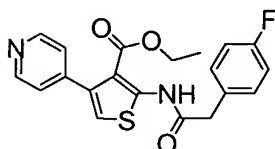
**I-B-234**



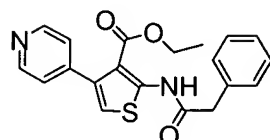
**I-B-235**



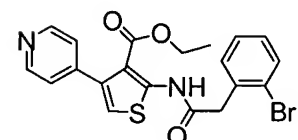
**I-B-236**



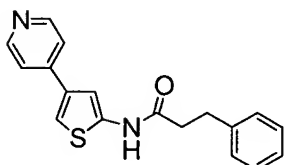
**I-B-237**



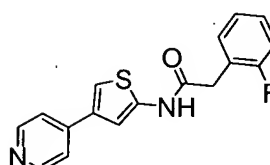
**I-B-238**



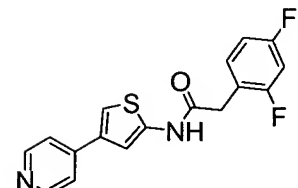
**I-B-239**



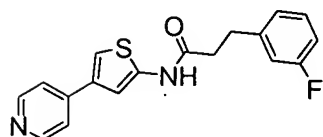
**I-B-240**



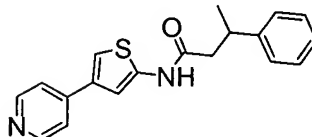
**I-B-241**



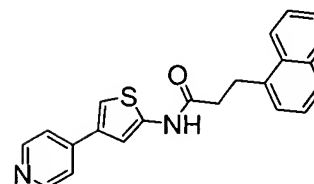
**I-B-242**



**I-B-243**

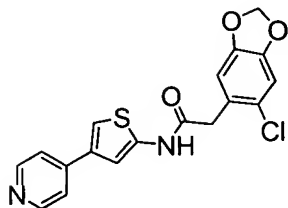


**I-B-244**

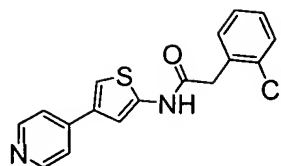


**I-B-245**

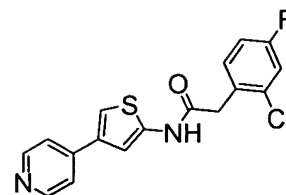
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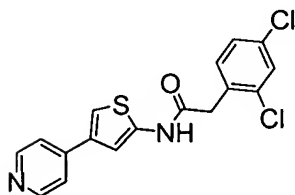
**I-B-246**



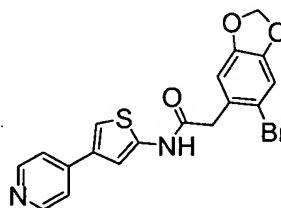
**I-B-247**



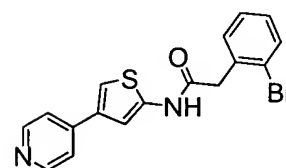
**I-B-248**



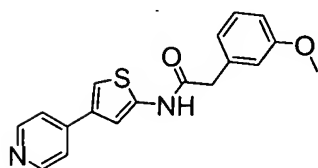
**I-B-249**



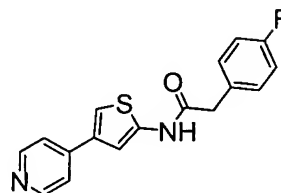
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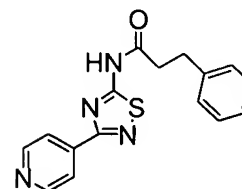
**I-B-251**



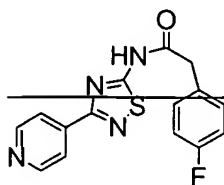
**I-B-252**



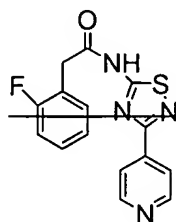
**I-B-253**



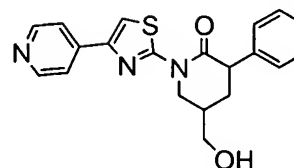
**I-B-254**



**I-B-255**

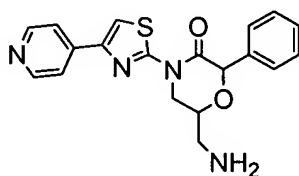


**I-B-256**

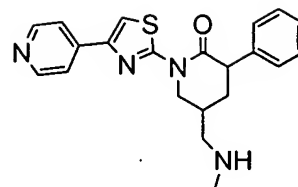


**I-B-275**

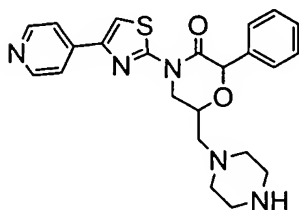
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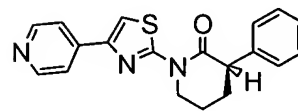
**I-B-276**



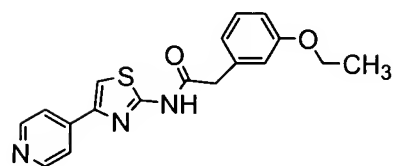
**I-B-277**



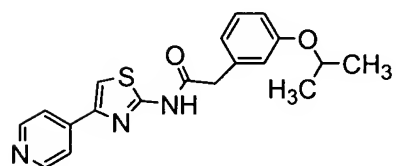
**I-B-278**



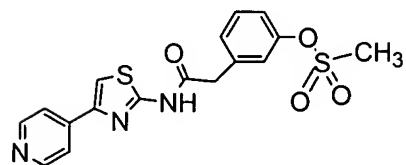
**I-B-279**



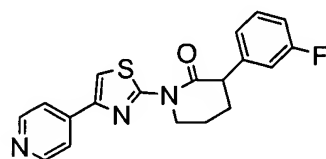
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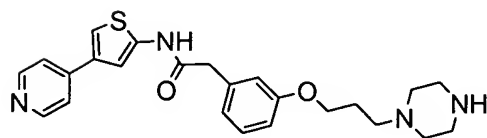
**I-B-281**



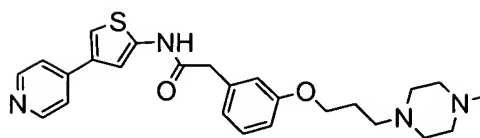
**I-B-282**



**I-B-283**

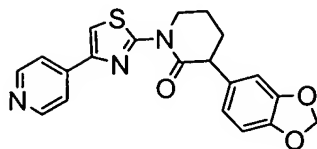


**I-B-284**

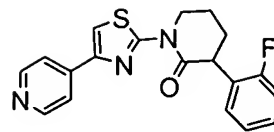


**I-B-285**

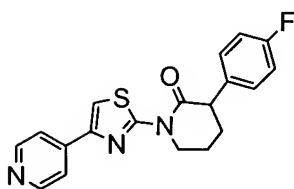
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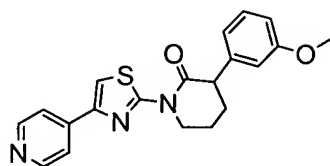
**I-B-286**



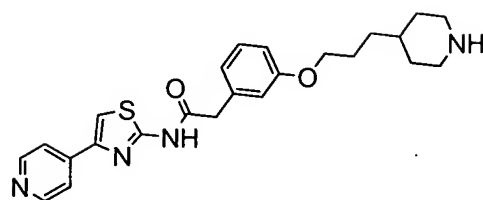
**I-B-287**



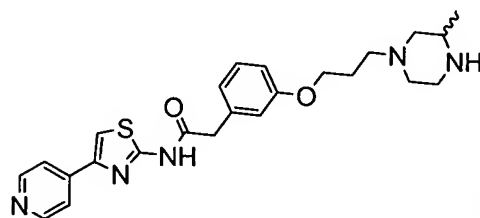
**I-B-288**



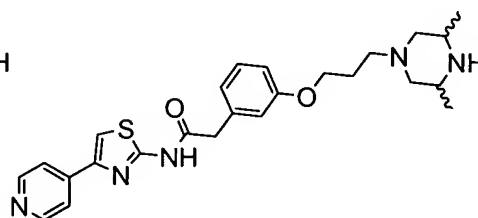
**I-B-289**



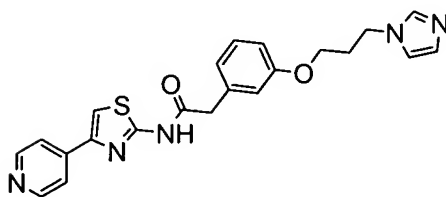
**I-B-290**



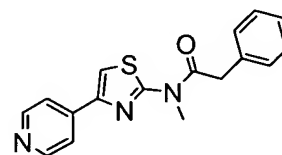
**I-B-291**



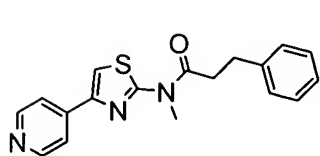
**I-B-292**



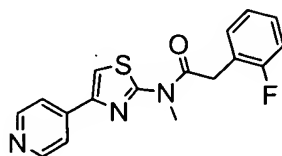
**I-B-293**



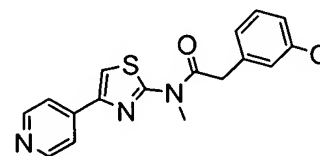
**I-B-294**



**I-B-295**

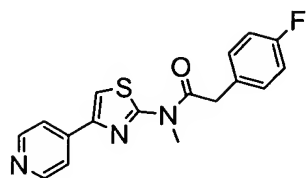


**I-B-296**

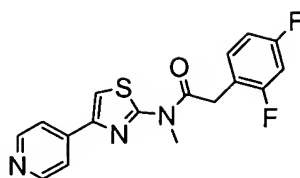


**I-B-297**

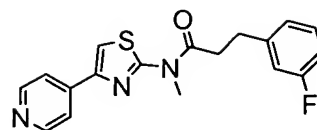
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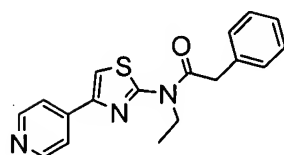
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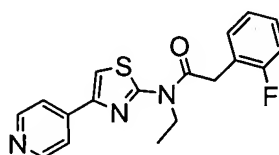
**I-B-299**



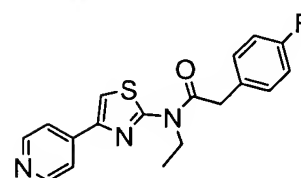
**I-B-300**



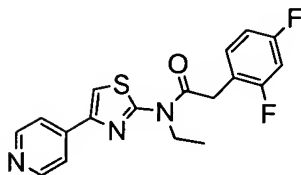
**I-B-301**



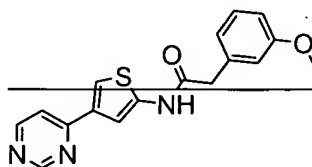
**I-B-302**



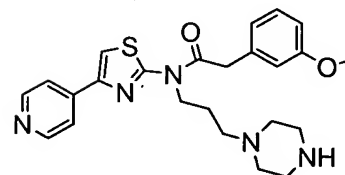
**I-B-303**



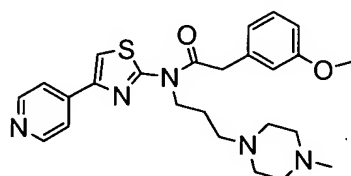
**I-B-304**



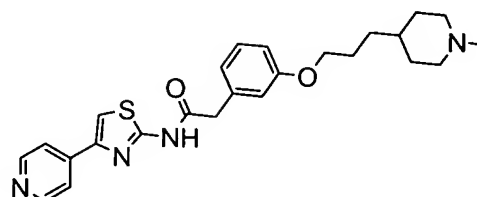
**I-B-305**



**I-B-306**

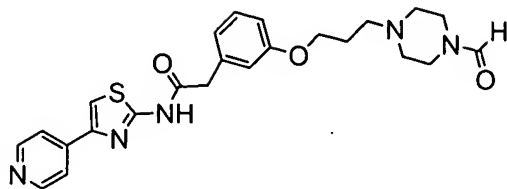


**I-B-307**

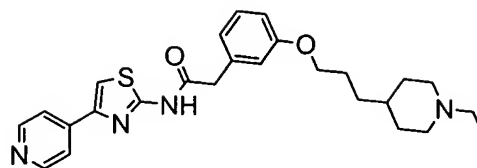


**I-B-308**

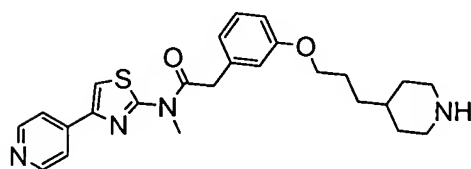
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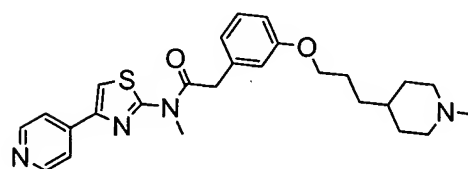
**I-B-309**



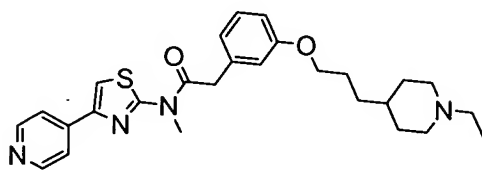
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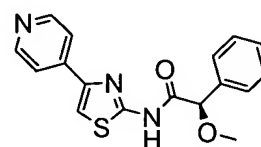
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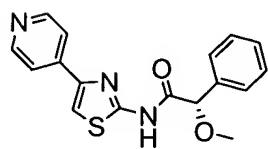
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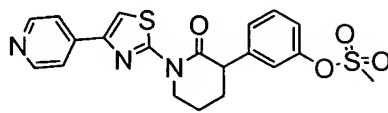
**I-B-315**



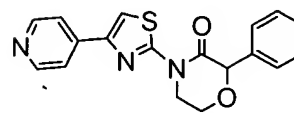
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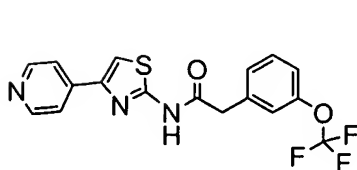
**I-B-322**



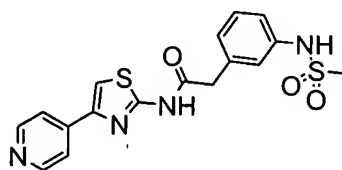
**I-B-323**



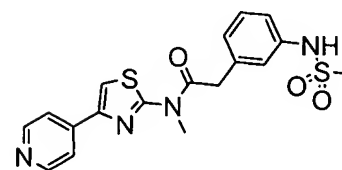
**I-B-324**



**I-B-325**

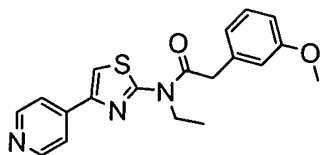


**I-B-326**

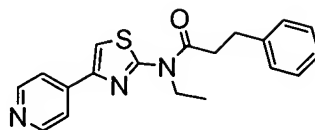


**I-B-327**

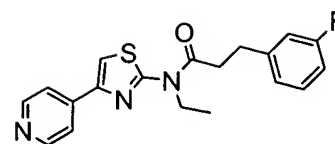
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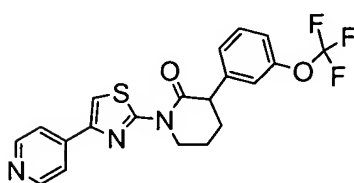
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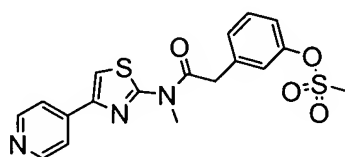
**I-B-329**



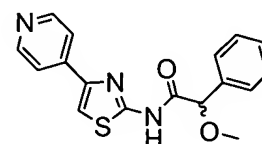
**I-B-330**



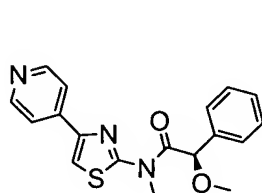
**I-B-331**



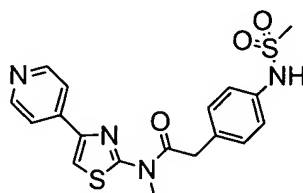
**I-B-332**



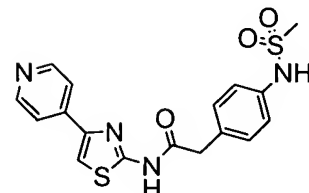
**I-B-333**



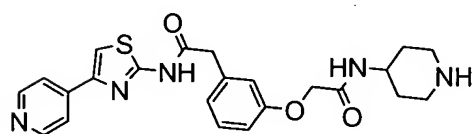
**I-B-334**



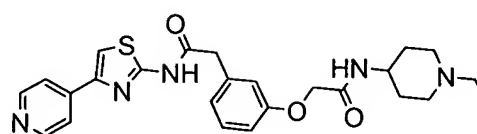
**I-B-335**



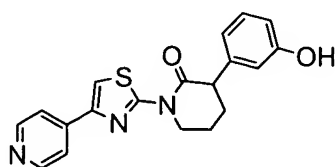
**I-B-336**



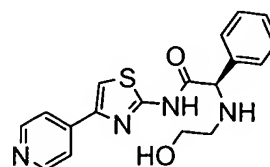
**I-B-337**



**I-B-338**



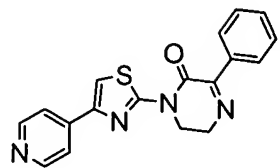
**I-B-339**



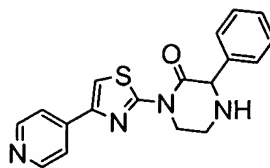
**I-B-340**



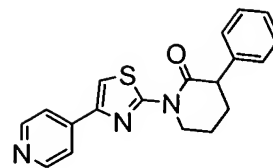
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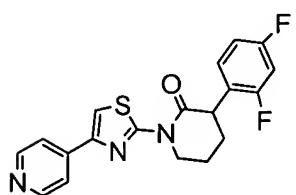
**I-B-341**



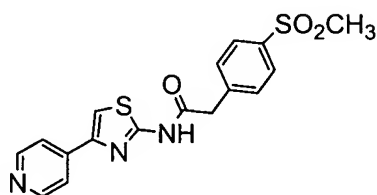
**I-B-342**



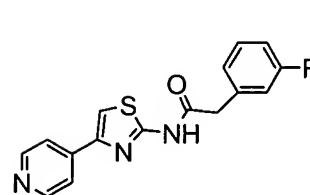
**I-B-343**



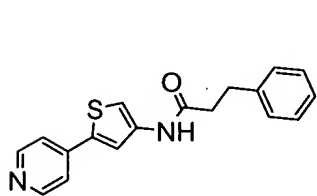
**I-B-344**



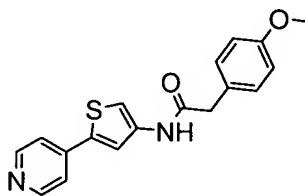
**I-B-345**



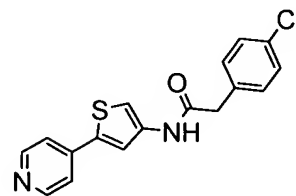
**I-B-346**



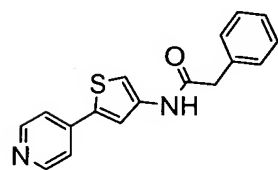
**I-C-1**



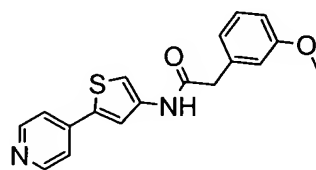
**I-C-2**



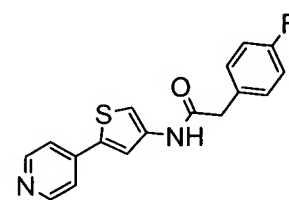
**I-C-3**



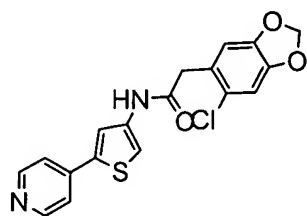
**I-C-4**



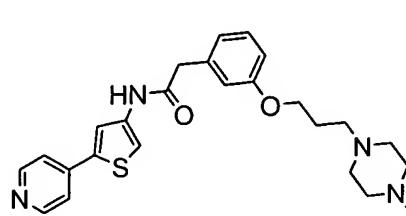
**I-C-5**



**I-C-6**

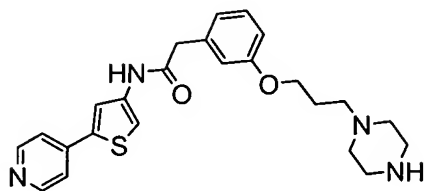


**I-C-7**

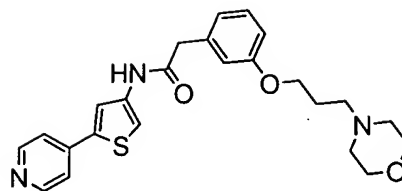


**I-C-8**

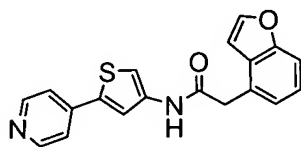
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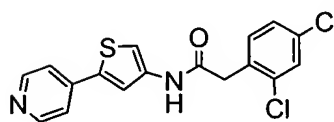
**I-C-9**



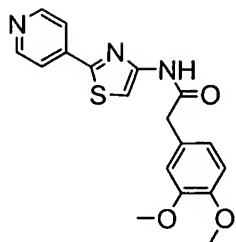
**I-C-10**



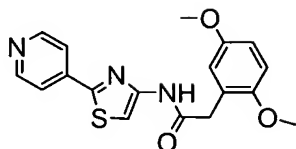
**I-C-11**



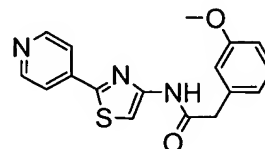
**I-C-12**



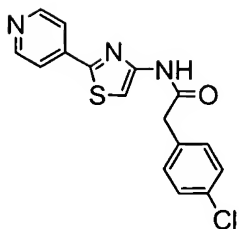
**I-C-13**



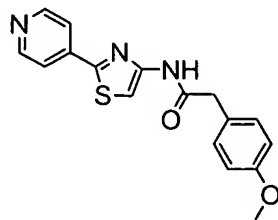
**I-C-14**



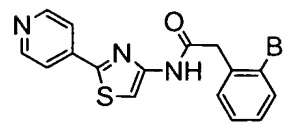
**I-C-15**



**I-C-16**

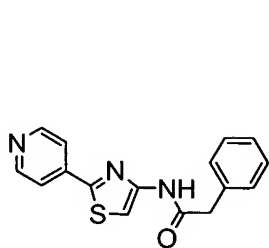


**I-C-17**

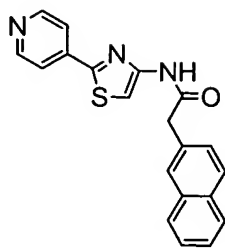


**I-C-18**

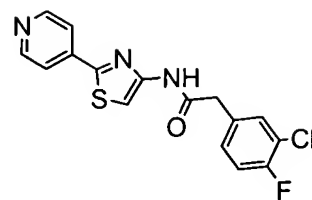
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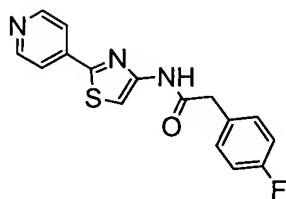
I-C-19



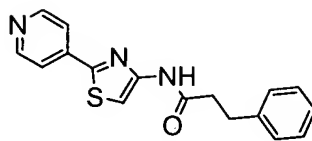
I-C-20



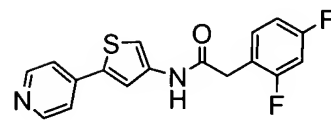
I-C-21



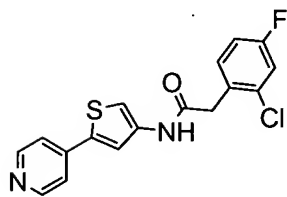
I-C-22



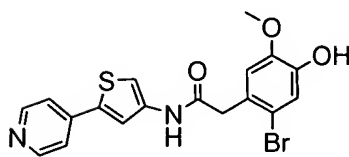
I-C-23



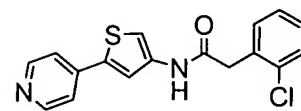
I-C-24



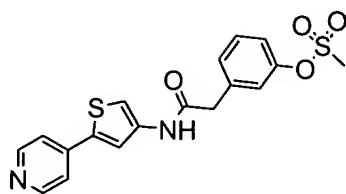
I-C-25



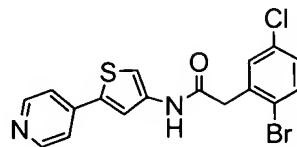
I-C-26



I-C-27

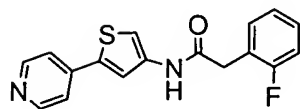


I-C-28

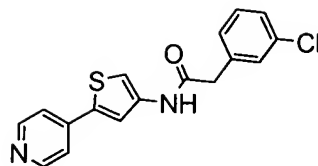


I-C-30

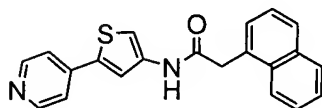
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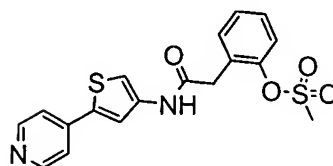
**I-C-31**



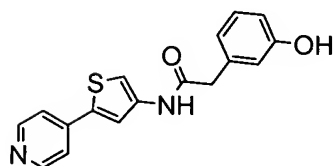
**I-C-32**



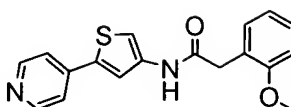
**I-C-34**



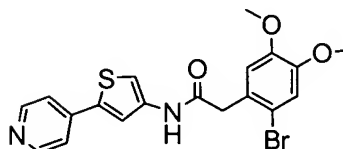
**I-C-36**



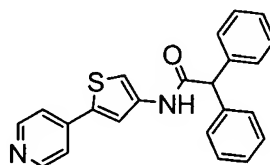
**I-C-37**



**I-C-38**



**I-C-39**



or I-C-41.

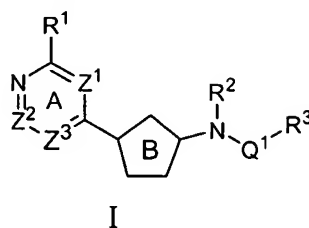
46. (Original) A composition comprising an effective amount of compound of claim 1, and a pharmaceutically acceptable carrier, adjuvant, or vehicle.

47-53. (Canceled)

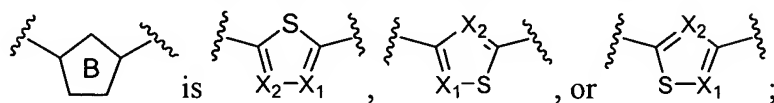
54. (Previously presented) A method of treating or lessening the severity of a disease or disorder selected from Alzheimer's disease, an allergy, asthma, or diabetes in a patient,

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said method comprising administering to said patient a compound or a composition comprising a compound having the formula:



or a pharmaceutically acceptable salt thereof, wherein:



$R^1$  is halogen, CN,  $\text{NO}_2$ , or  $\text{V}_m\text{R}$ ;

$Z^1$  and  $Z^3$  are each independently  $\text{CR}^Z$ , and  $Z^2$  is  $\text{CR}^1$ ;

each occurrence of  $\text{R}^Z$  is independently halogen, CN,  $\text{NO}_2$ , or  $\text{U}_n\text{R}'$ ;

$\text{R}^2$  is  $\text{U}_n\text{R}'$ ;

$\text{X}^1$  and  $\text{X}^2$  are each independently  $\text{CR}^4$  or N;

each occurrence of  $\text{R}^4$  is independently halogen, CN,  $\text{NO}_2$ , or  $\text{V}_m\text{R}$ ;

each occurrence of U or V is independently an optionally substituted  $\text{C}_{1-6}$  alkylidene chain, wherein up to two methylene units of the chain are optionally and independently replaced by  $-\text{NR}-$ ,  $-\text{S}-$ ,  $-\text{O}-$ ,  $-\text{CS}-$ ,  $-\text{CO}_2-$ ,  $-\text{OCO}-$ ,  $-\text{CO}-$ ,  $-\text{COCO}-$ ,  $-\text{CONR}-$ ,  $-\text{NRCO}-$ ,  $-\text{NRCO}_2-$ ,  $-\text{SO}_2\text{NR}-$ ,  $-\text{NRSO}_2-$ ,  $-\text{CONRNR}-$ ,  $-\text{NRCONR}-$ ,  $-\text{OCONR}-$ ,  $-\text{NRNR}-$ ,  $-\text{NRSO}_2\text{NR}-$ ,  $-\text{SO}-$ , or  $-\text{SO}_2-$ ;

m and n are each independently 0 or 1;

each occurrence of R is independently hydrogen or an optionally substituted  $\text{C}_{1-6}$  aliphatic group; and each occurrence of  $\text{R}'$  is independently hydrogen or an optionally substituted  $\text{C}_{1-6}$  aliphatic group, a 3-8-membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur, or an 8-12 membered saturated, partially unsaturated, or fully

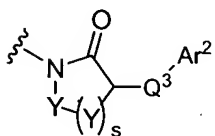
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unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from nitrogen, oxygen, or sulfur; or R and R', two occurrences of R, or two occurrences of R', are taken together with the atom(s) to which they are bound to form an optionally substituted 3-12 membered saturated, partially unsaturated, or fully unsaturated monocyclic or bicyclic ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

Q<sup>1</sup> is -CO-, -SO<sub>2</sub>-, or -SO<sub>2</sub>NR-;

R<sup>3</sup> is Q<sup>2</sup>-Ar<sup>1</sup>,

or R<sup>2</sup> and Q<sup>1</sup>-R<sup>3</sup>, taken together with the nitrogen atom, form the cyclic group:



, where s is 1 or 2, each occurrence of Y is independently, as valency and stability permit, -CO-, -CS-, -SO<sub>2</sub>-, -O-, -S-, -NR<sup>5</sup>-, or -C(R<sup>5</sup>)<sub>2</sub>-, and R<sup>5</sup> is U<sub>n</sub>R';

Q<sup>2</sup> and Q<sup>3</sup> are each independently a bond or a C<sub>1-6</sub> alkylidene chain, wherein up to two methylene units of the chain are each optionally and independently replaced by -S-, -O-, -CS-, -CO<sub>2</sub>-, -OCO-, -CO-, -COCO-, -CONR', -NR'CO-, -NR'CO<sub>2</sub>-, -SO<sub>2</sub>NR', -NR'SO<sub>2</sub>-, -CONR'NR', -NR'CONR', -OCONR', -NR'NR', -NR'SO<sub>2</sub>NR', -SO-, or -SO<sub>2</sub>-; and wherein any carbon atom in the one or more methylene units is optionally substituted with one or two occurrences of R<sup>6</sup>, wherein each occurrence of R<sup>6</sup> is independently halogen, CN, NO<sub>2</sub>, or U<sub>n</sub>R', or two occurrences of R<sup>6</sup>, or R' and R<sup>6</sup>, taken together with the atoms to which they are bound, form an optionally substituted 3-6-membered cycloalkyl, heterocyclyl, aryl or heteroaryl ring; [[and]]

Ar<sup>1</sup> is a 5-8 membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from oxygen or sulfur, or an 8-12 membered saturated, partially unsaturated, or fully unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from oxygen or sulfur; wherein Ar<sup>1</sup> is optionally substituted with 0-5 independent occurrences of TR<sup>7</sup>; wherein T is a

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bond or is a C<sub>1</sub>-C<sub>6</sub> alkylidene chain wherein up to two methylene units of T are optionally and independently replaced by -NR-, -S-, -O-, -CS-, -CO<sub>2</sub>-, -OCO-, -CO-, -COCO-, -CONR-, -NRCO-, -NRCO<sub>2</sub>-, -SO<sub>2</sub>NR-, -NRSO<sub>2</sub>-, -CONRNR-, -NRCONR-, -OCONR-, -NRNR-, -NRSO<sub>2</sub>NR-, -SO-, or -SO<sub>2</sub>-;

Ar<sup>2</sup> is a 5-8 membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur, or an 8-12 membered saturated, partially unsaturated, or fully unsaturated bicyclic ring system having 0-5 heteroatoms independently selected from nitrogen, oxygen, or sulfur; wherein Ar<sup>2</sup> is optionally substituted with 0-5 independent occurrences of TR<sup>7</sup>; wherein T is a bond or is a C<sub>1</sub>-C<sub>6</sub> alkylidene chain wherein up to two methylene units of T are optionally and independently replaced by -NR-, -S-, -O-, -CS-, -CO<sub>2</sub>-, -OCO-, -CO-, -COCO-, -CONR-, -NRCO-, -NRCO<sub>2</sub>-, -SO<sub>2</sub>NR-, -NRSO<sub>2</sub>-, -CONRNR-, -NRCONR-, -OCONR-, -NRNR-, -NRSO<sub>2</sub>NR-, -SO-, or -SO<sub>2</sub>-; and each occurrence of R<sup>7</sup> is independently R', halogen, NO<sub>2</sub>, or CN.

55. (Previously presented) The method of claim 54, wherein said compound or composition is used to treat or lessen the severity of an allergy or asthma.

56. (Previously presented) The method of claim 54, wherein said compound or composition is used to treat or lessen the severity of diabetes.